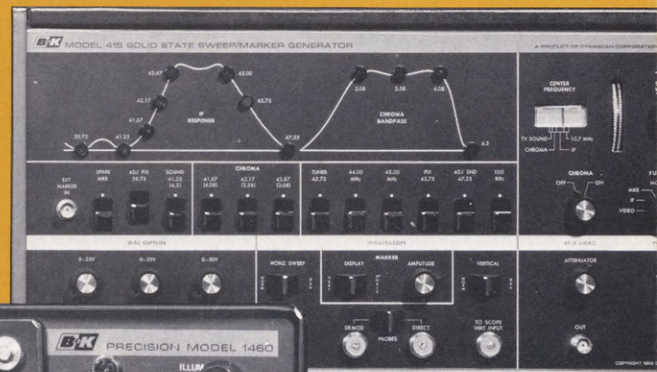
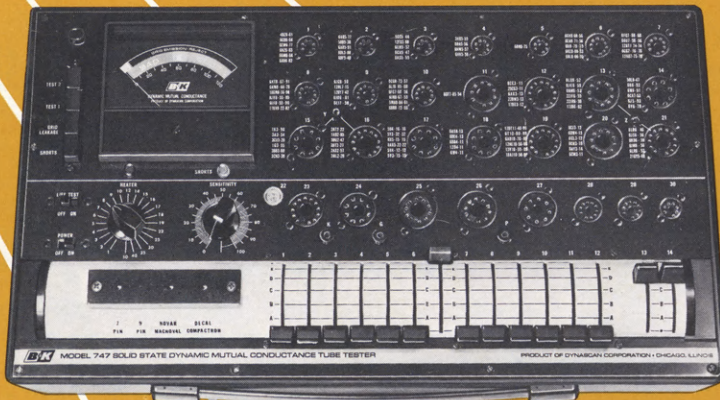
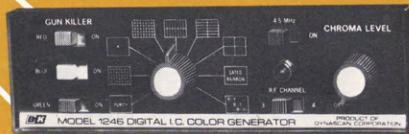


B&K Precision Test Equipment

- Color Generators •
- F.E.T.-VOM's •
- Sweep/Marker Generator •
- Transistor Testers •
- Triggered Sweep Scope •
- Tube Testers •
- TV Analyst •

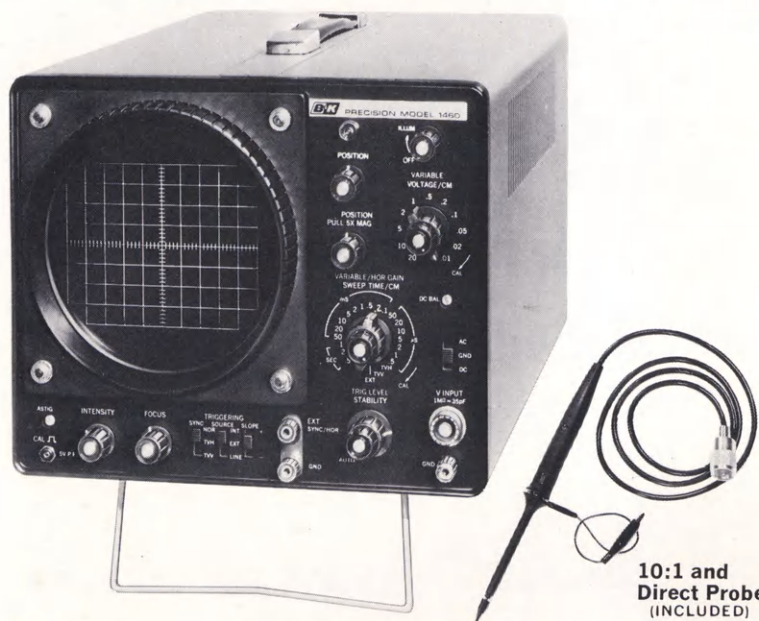
for radio-TV and audio
servicing . . . industry,
laboratories, schools

PRODUCTS OF DYNASCAN CORP.



New! Triggered Sweep Oscilloscope

B&K -Precision Model 1460



- *The ultimate in triggered sweeps: 19 positions, PLUS special TV-H and TV-V positions for one-knob selection of horizontal or vertical TV signals—automatically synchronized!*
- *DC to 10 MHz Bandwidth with 10 mv/cm sensitivity.*

NEW! Handy stand for "eye-angle" viewing . . .

10:1 and
Direct Probe
(INCLUDED)

... combines Triggered Sweep with Vectorscope capability

Here's the scope you've been waiting for! Lightning-fast signal-tracing now is possible with the 1460—saves many hours of your valuable time by aiding you to pin-point the problem quickly and accurately. Fully automatic triggered sweep enables you to view the entire complex TV signal or any portion thereof—including the VITS (vertical interval test signal), and the "back porch" of the horizontal sync pulse, with the color burst information—all automatically synchronized and "locked in." Use the TV-H and TV-V sweep selection positions to see two horizontal lines or two vertical fields, automatically synchronized. By flicking a single knob, you can switch back and forth and see rock-steady patterns of horizontal and vertical signals—without any other adjustments!

Work with super-bright patterns on the flat-face, high-sensitivity 5" screen. The 1460 gives you optimized, high accelerating anode voltage for sharp, high-intensity patterns at ultra-fast writing speeds of up to 0.1 microsecond/cm (with x5 magnification). There's no "dot blooming" with the 1460.

Front-panel Vectorscope capability also is yours with the 1460, due to its extremely wide bandwidth and very high sensitivity. Vertical amplifier goes from DC out to 10 MHz at 10 mv/cm sensitivity; horizontal amplifier from DC to well beyond 800 KHz.

The only tube in the 1460 is the CRT—all else is solid state. Fully protected drift-free F.E.T. input stage provides high input impedance and wideband frequency response for sharp portrayal of those low-voltage patterns.

Triggering circuit is the active filter type—locks the internal sweep circuit with the input signal regardless of frequency or complexity of the waveform. Magnification circuit expands the sweep up to five times in any sweep time position; provides big, easy-to-read patterns on the 8 x 10 cm, edelgit graticule of the CRT.

A unique self-contained probe design enables you to convert quickly from direct to 10:1 low capacity operation. Replaceable tips are provided to accommodate your specific job requirements.

FEATURES

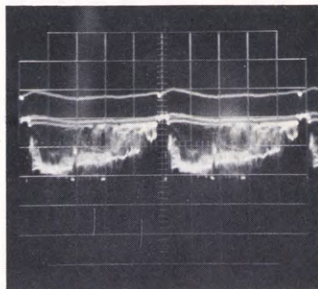
- Displays the entire complex TV signal or any portion thereof—including the "back porch" of horizontal sync pulse with color burst information—all automatically synchronized. Exclusive sync separator locks sweep for jitter-free waveform display. Even the Vertical Interval Test Signals (VITS) can be locked in and expanded for viewing.
- High sensitivity (10 mv/cm) displays smallest signal levels in transistor and IC circuits with positive sync. Will sync waveform displays with amplitudes as low as one cm peak-to-peak.
- DC amplifier permits measurement of AC and DC signal components.
- Accurate reproduction of high frequency signals (3.58 MHz color burst) with wide bandwidth amplifier (10 MHz).
- Exclusive circuit optimizes high voltage on accelerating anode for sharp, ultra-bright patterns even at super-fast writing speeds of up to 0.1 microsecond/cm.
- 100% solid state.
- Front-panel Vectorscope capability for ease of use.

The Model 1460 combines all the advantages of triggered sweep, with automatic sync characteristics never before achieved in oscilloscopes. Thus, you can see the most complex waveforms—that only a triggered sweep scope will display—with the ease of sync heretofore obtainable only in TV sets. In addition, the 1460 features 1, 2 and 5 steps on the calibrated vertical attenuator, insuring that the trace being viewed will have an amplitude of more than half the height of the screen, regardless of the amplitude of peak-to-peak voltages being checked. Note also: The advanced amplifier circuits in the 1460 give it a very high sensitivity of 10 mv per centimeter—and it takes only 10 mv of signal to perfectly synchronize the 1460.

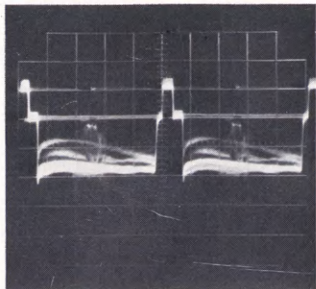
Model 1460 Oscilloscope

Net: \$399.95

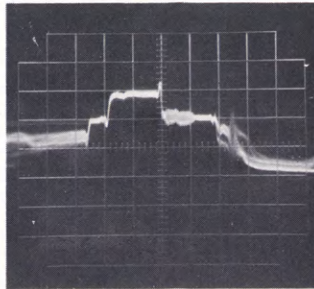
Here's What You'll See on the Screen of Your 1460:



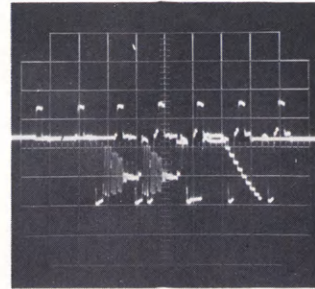
2 Frames of Vertical TV Signal.



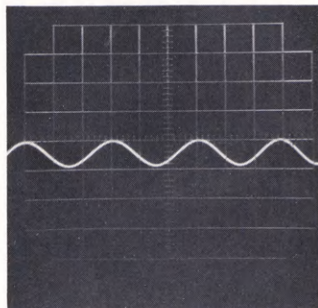
2 Lines of Horizontal TV Signal.



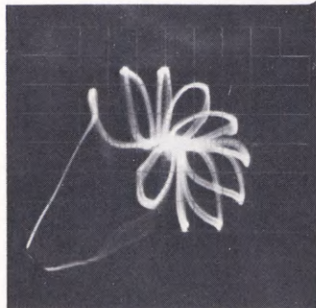
Expanded Horizontal TV Signal with "Back Porch." Note color burst info.



VITS (Vertical Interval Test Signal), synchronized at 60 Hz sweep speed.



Only 1 cm of synchronized 3.58 MHz Color Signal, expanded 5x.



Vectorscope pattern.

Ideal Scope for Industry, Labs, Schools

The Model 1460 oscilloscope's advanced-design features make it perfect for use in industry on production lines; in test, R & D and other electronic labs; in medical electronics, and in schools. Automatic triggering feature and exceptional bandwidth extend the versatility of scope application, speed up test procedures and experiments. For the student, learning to use the 1460 becomes a pleasurable task, and serves as a key to understanding modern electronics and circuits.

SPECIFICATIONS

VERTICAL AMPLIFIER

Sensitivity: 10 millivolts/cm to 20 volts/cm, $\pm 5\%$, divided into 11 calibrated ranges, each with fine adjustment.

Frequency Response:

DC, DC to 10 MHz (-3 db);
AC, 2 Hz to 10 MHz (-3 db)

Risetime: 35 nanoseconds.

Overshoot: 3% or less.

Input Impedance: 1 megohm, shunted by 35 pf.

Maximum Input Voltage: 600 volts p-p.

SWEEP CIRCUIT

Sweep System: Automatic and triggered.

Sweep Time: 0.5 microsecond/cm to 0.5 second/cm ($\pm 5\%$), divided into 19 calibrated ranges (1, 2, 5 steps), each with fine adjustment. Special TV-H position displays two horizontal lines and TV-V position displays two vertical fields.

Magnification: 5 times, at all speeds; increases maximum sweep to 0.1 microsecond/cm.

Linearity: 0.5 sec/cm to 2 microsec/cm ranges: 3% or less.
1.0 microsec/cm to 0.5 microsec/cm: 5% or less.

TRIGGERING

Type: Internal, line and external.

Slope: Positive or negative.

Range: 20 Hz to 10 MHz (minimum 1.0 cm deflection on CRT).

TV Sync: Unique sync separator circuit generates sweep synchronizing pulses corresponding to the vertical and horizontal sync pulses of complex TV waveforms. Optimum sync separation for vertical and horizontal sync pulses is provided so that any portion of the TV waveform can be synchronized and expanded for viewing, even at deflection amplitudes as low as one centimeter.

HORIZONTAL AMPLIFIER

Sensitivity: 300 millivolts/cm. **Response:** DC-800 KHz (-3 db).

Input Impedance: 100,000 ohms, shunted by 40 pf.

OTHER SPECIFICATIONS:

Calibration Voltage: 1 KHz square wave, 5 volts p-p ($\pm 5\%$)

Intensity Modulation: 30 volts p-p, minimum.

Semiconductor Complement: 5 F.E.T.'s, 40 transistors, 14 diodes.

Combination 10-to-1 and Direct Probe Input Impedance: Low-capacity, 10-to-1: 10 megohms, 18 pf. Direct: 1 megohm, 120 pf.

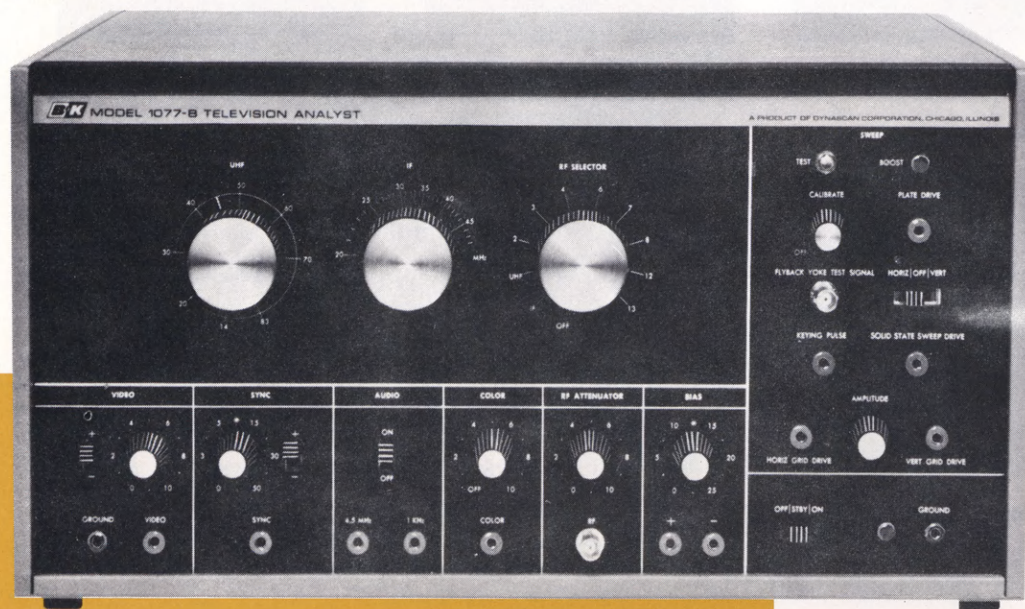
Dimensions: 9 x 10 x 17" deep. **Shpg. Wt.:** 27 lbs.

Power Requirements: 105-125 VAC, 50-60 Hz. 20 watts.
Supplied with 3-wire line cord.

The ultimate in a triggered sweep oscilloscope . . .

Television Analyst

B&K Model 1077B



**WITH SOLID-STATE
SWEEP DRIVE**

**THE ANALYST
THAT DOUBLES
TROUBLE-SHOOTING
SPEED**

**WITH ALL UHF
CHANNELS 14-83**

**EIGHT VHF RF
CHANNELS**

Solid-state sweep drive . . . the 1077B
now can check transistorized sweep circuits . . .
ALL sections of TV receivers now are covered!

*...checks every stage in Black-&-White and Color TV receivers^o
from antenna input terminals to the Grid of the CRT*

REDUCES SERVICE TIME BY EMPLOYING SIGNAL INJECTION TO ISOLATE CIRCUIT DEFECTS! This simplified technique eliminates hours lost for which you cannot charge your customers on tough dogs, intermittents and general TV troubleshooting. This one instrument, with its complete, accurate diagnostic help, enables any serviceman to cut servicing time in half, satisfy more customers and make more money. No external scope or wave-form interpretation is needed.

Eight VHF RF channels, UHF channels 14-83, 20 to 45 MHz IF, audio, video, sync, three color adjustment patterns, bias voltage and AGC keying pulse are all available.

The Analyst permits you to inject your own TV signals at any time, at any point . . . while you watch the generated

test pattern on the picture tube or television set itself. This makes it quick and easy to isolate, pinpoint and correct the trouble in any stage on black and white, color TV, plus transistorized and UHF sets.

The Model 1077B consists principally of RF and IF generators which are modulated with the output of a built-in flying spot scanner. The scanner uses slides of standard test patterns which are supplied.

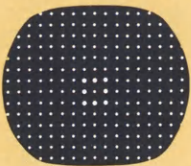
This unit, with the use of other slides, can be used for closed-circuit broadcast in video paging systems, store window or display-floor promotions.

Model 1077B Television Analyst.

Net: \$399.95

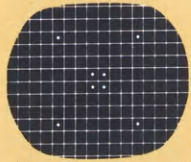
The 1077B is the quickest, simplest way to test every stage of any TV...

COLOR RECEIVER TEST PATTERNS



WHITE DOT PATTERN

Generates white dot and cross hatch for color convergence and crystal-controlled color bar patterns for color control adjustments.



CROSS HATCH PATTERN



COLOR BAR PATTERN

Provides crystal-controlled keyed rainbow color display and scanner signal to test color sync circuits, check range of hue control, and align color demodulators. Demonstrates correct color values to customers.

Front panel provides burst and color signal the level of which is adjustable.

Features for . . . Transistor and Tube Type TV Receivers Both Color and Black and White

• **RF, IF, VHF, UHF** — Supplies complete RF, IF, VHF and UHF signals with test pattern, video, and 1 KHz audio modulation to quickly trouble shoot each stage in these sections of the TV receiver. Enables you to check the RF sensitivity and proper operation of AGC.

• **VIDEO** — Flying spot scanner reproduces a complete black and white test pattern on the screen. Analyst injects signal into each video stage for fast, visual trouble-shooting and correction. Makes it easy to check bandwidth, resolution, shading and contrast capabilities.

• **INTERMITTENTS** — Stable test signal injection (stage by stage) while watching the test pattern saves valuable time and work in locating intermittent troubles — quickly isolates the difficulty and finds the exact stage where it is occurring.

• **AUDIO** — Provides an FM modulated 4.5 MHz sound channel. This audio carrier is modulated from the built-in 1 KHz tone generator. Injection of the 1 KHz tone signal simplifies trouble-shooting of the audio section of any TV receiver.

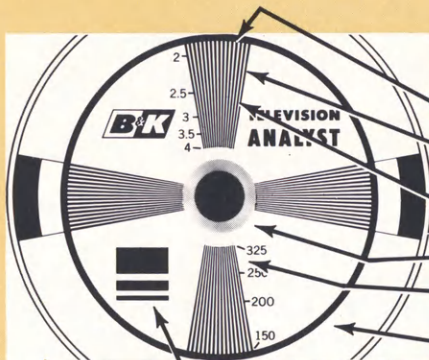
• **SYNC** — Provides composite synchronizing signals (negative or positive), adjustable in amplitude up to 50 volts peak-to-peak, to inject directly into each sync stage for trouble-shooting sync circuits.

• **SWEEP CIRCUIT DRIVING PULSES** — Provides separate vertical and horizontal plate and grid drive or vertical and horizontal solid state sweep drive to check output circuit and interrelated components. Used with boost indicator, it is easy to solve rough sweep output problems.

• **YOKE AND TRANSFORMER TEST** — Provides sensitive tests for horizontal output transformer. Quickly detects defective windings. Driving signal tests vertical output transformers and yokes.

• **HIGH VOLTAGE INDICATOR** — "Go-No-Go" indicator lights quickly pinpoint and reveal the hard-to-find troubles in horizontal output transformer and high voltage network.

Double Trouble Shooting Speed on Both UHF and VHF



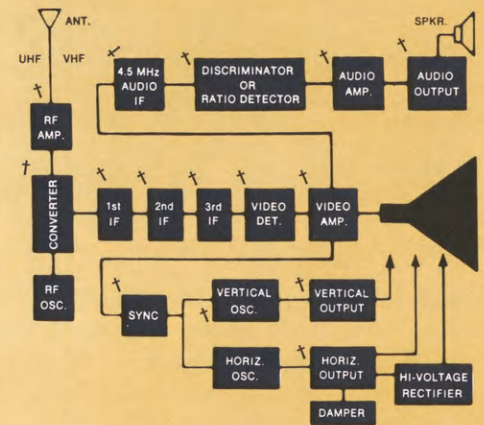
This Standard Test Pattern or other signal of your choosing may be injected at the indicated test points.

Typical problems that can be repaired using the 1077B:

- To set proper size, set top and bottom of circle to top and bottom edges of receiver screen.
- Determine frequency response at point where lines of wedge merge. Bandwidth shown in megacycles.
- Ringing or overshoot is indicated by white trailing edges.
- Center of pattern should be adjusted to be at physical center of receiver screen.
- Determine resolution at point where lines of wedge merge. Resolution is shown in number of lines.
- Adjust receiver for perfect circle set linearity height and width.
- Low frequency phase shift is evidenced by black trailing smear.

Specifications:

1. **Input Power**
 - A. 100 watts
 - 105-125 volts
 - 60 Hz AC
2. **IF Output**
 - A. 20 to 48 MHz
 - 0 to 70,000 microvolts
 - minimum at 75 ohms
3. **VHF Output**
 - A. Channels 2 to 6
 - 0 to 12,000 microvolts
 - minimum at 75 ohms
 - B. Channels 7 to 13
 - 0 to 6000 microvolts
 - minimum at 75 ohms
4. **UHF Output**
 - A. Channels 14 to 83
 - 0 to 1000 microvolts
 - minimum at 75 ohms
5. **Video Output**
 - A. composite signal, 0 to 2.5 volts peak-to-peak
 - minimum at 1000 ohms positive or negative polarity
6. **Sync Output**
 - A. 0 to 50 volts peak-to-peak, variable
 - B. 10 K ohms at 50 volts
 - 1 K ohm at 10 volts, positive or negative polarity
7. **4.5 MHz Output**
 - A. frequency modulated by 1 KHz audio tone at 25 KHz deviation, 180 ohms
8. **1 KHz Output**
 - A. at least 1 volt peak-to-peak across 300 ohms
9. **Color Output**
 - A. crystal-controlled 3,563,795 Hz $\frac{1}{2}$ to 5 volts peak-to-peak
 - 100 ohms at minimum
 - 1000 ohms at maximum
10. **Bias Supply**
 - A. positive or negative polarity
 - 0 to 25 volts into infinite load
 - B. 0 to 15 volts at .25 amp
11. **Vertical Grid Drive Output**
 - A. 60 Hz
 - 0 to 150 volts peak-to-peak
12. **Horizontal Grid Drive Output**
 - A. crystal-controlled 15,750 Hz $\pm 0.5\%$
 - B. 150 volts peak-to-peak minimum
13. **AGC Keying Pulse Output**
 - A. 15,750 Hz
 - B. 400 volts peak-to-peak at 30 K ohms
14. **Horizontal Plate Drive Output**
 - A. sufficient to drive all vacuum tube circuit flyback transformers
15. **Horizontal Solid State Sweep Drive**
 - A. variable 0 to 11 volts, peak to peak.
16. **Vertical Plate Drive Output**
 - A. sufficient to drive all vacuum tube circuit vertical transformers
17. **Vertical Solid State Sweep Drive**
 - A. variable 0 to 17 volts, peak to peak.
18. **Power Requirements**
 - A. 105-125 VAC, 60 Hz; B. 3 wire linecord
19. **Dimensions**
 - A. Height: 9 $\frac{3}{4}$ "
 - B. Width: 18"
 - C. Depth: 12"
 - D. Weight: 31 lbs.



The TV Analyst that cuts servicing time in half...

Solid-State Sweep/Marker Generator

B&K Model 415



4
instruments
in one

*...the most useful test instrument ever
devised for TV alignment*

ALIGN TV SETS WITH CONFIDENCE! The objective of the 415 is to simplify sweep alignment of all television receivers, with special emphasis on color sets. This was accomplished beyond all expectations.

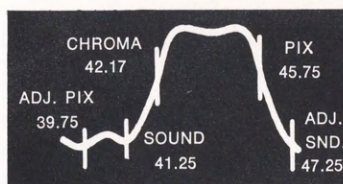
The unit combines in one instrument all you need for alignment except a scope and a VTVM. Sweep frequencies, marker frequencies, three bias supplies and the simplest connections are all included.

The 100 KHz markers permit aligning new automatic fine tuning in all color receivers. Accuracy of all markers is absolutely reliable because they are crystal controlled. Even MHz 3.58 can be obtained as a crystal controlled frequency. Provides stable patterns on the scope. Test leads and controls are completely unaffected by body capacitance and movement.

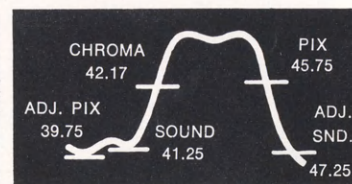
An extra plus is the instruction manual which illustrates step-by-step the alignment process . . . acts as a private instructor. No more concern about alignment problems.

Model 415 Sweep/Marker Generator. Net: \$399.95

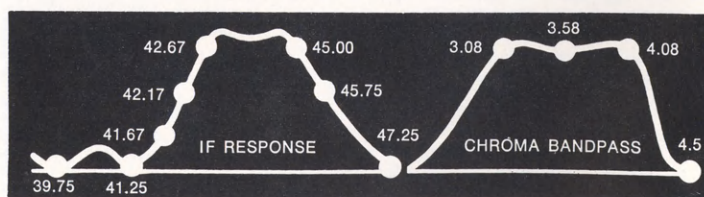
B & K EXCLUSIVE MARKER TILT FEATURE permits markers to be viewed in horizontal and vertical position. Insures utmost accuracy in setting markers at exact locations on the bandpass curve. Extremely useful in trap alignment. Permits user to accurately locate trap frequencies that occur close to the base line on the IF curve.



Vertical Markers



Markers Tilted Horizontally



Marker Frequency Guide on Front Panel

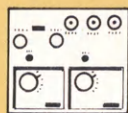
FEATURES

- Simple overall alignment checks. Connect RF sweep (Channel 4 or 10) to antenna terminals of receiver and, without further signal input reconnections, evaluate alignment condition of all tuned signal-processing circuits of the TV receiver.
- Completely self-contained solid-state sweep and marker generators.
- Electronic sweep insures reliability and linear sweep presentation.
- True post injection of 10 crystal-controlled markers. All 10 can be used simultaneously or individually. An 11th marker oscillator circuit (less crystal) is included to provide an optional crystal-controlled marker function in the 30 MHz to 50 MHz range.
- A continuous chain of 100 KHz markers can be superimposed on any of the internal crystal controlled markers. This simplifies alignment of FM receiver IF stages and discriminators as well as automatic fine tuning (AFT) circuits of TV receivers by providing continuous bandwidth reference markers at 100 KHz intervals.
- Visual reproduction of idealized alignment curves provided on front panel with lights to indicate desired marker positions . . . provides a constant reference and minimizes errors.
- Transistorized power supply regulators (zener-diode referenced) assure maximum stability and minimum drift.
- Three bias supplies, each with reversible polarity, can be used with tube and transistor sets, eliminate need for extra equipment.
- RF cable terminating impedances of 300 and 72 ohms can be switched as required for signal injection at the antenna or tuner mixer or directly into the IF stages. DC blocking is built into the RF cable termination.
- Built-in 15 KHz filter eliminates the need to disable horizontal output circuits during alignment.
- Compensation for poor low frequency response of oscilloscope assures accuracy regardless of scope used.
- Pattern polarity reversal and sweep reversal features enable user to match oscilloscope displays as shown in manufacturers' alignment procedures.
- Unity gain through signal-processing circuits of Model 415 provides continuous monitoring of peak-to-peak amplitudes of response curves on the oscilloscope.
- Exclusive marker tilt and marker amplitude control features permit easy identification of marker position regardless of sweep curvature and insure positive trap and overall alignment.
- Video Sweep output permits direct sweep alignment of chroma circuits where specified by manufacturers.
- All crystal controlled IF marker signals are available at the generator output for spot alignment of traps and prealignment of bandpass circuits. Markers can be amplitude modulated (400 Hz) or unmodulated, as desired.
- After initial hook-up to TV receiver, IF and chroma response curves can be observed without additional intercabling changes. All "intercabling changes and generator selections" are done internally by the master function switch and front panel controls.
- New instruction manual simplifies TV alignment.
- Includes all leads and cables, including direct and demodulator probes, at no extra charge.

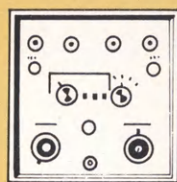
SWEEP/MARKER GENERATOR replaces these 4 instruments



Sweep Generator



Bias Supply



Marker Adder



Marker Generator

Complete Accessory Package

1 RF cable with switch selectable terminations (75/300 ohms); Direct probe, MIC connector and built-in 10K isolation resistor; 1 PR-151 RF demodulator probe; 1 shielded cable, MIC connectors at both ends; 2 shielded cables, MIC connector at one end, banana plugs at other end; 1 shielded cable, 3 bias leads (red); 1 ground lead (black); 2 IF loading blocks for stage-by-stage alignment.

Specifications

1. Available Outputs

- A. Video Sweep (0-6 MHz)
- B. IF Sweep (35-50 MHz)
- C. Unmodulated Markers
- D. Modulated Markers
- E. Channel 4 RF Sweep
- F. Channel 10 RF Sweep
- G. 10.7 MHz Sweep

2. Sweep Widths

- RF-IF: 1 MHz to over 10 MHz
- 10.7: 100 KHz to 2 MHz

3. Output Impedance

- A. 72 Ohms
- B. 300 Ohms for RF Output to Antenna

4. IF Markers (10 standard crystal-controlled)

- A. 39.75 MHz Adj. CH. Pix Trap

B. 41.25 MHz Sound Trap

C. 41.67 MHz IF Chroma Sideband Carrier

D. 42.17 MHz Chroma Sub-carrier

E. 42.67 MHz IF Chroma Sideband Carrier

F. 42.75 MHz IF Tuner Link

G. 44.00 MHz IF Center Frequency

H. 45.00 MHz IF Reference Frequency

I. 45.75 MHz Pix Carrier

J. 47.25 MHz Adj. CH. Sound Trap

K. Selectable 100 KHz marker chain for 100 KHz interval identification with any of the above markers for FM and TV AFT alignment

L. Additional marker oscillator for customer option; will accept crystal in the 35-50 MHz range

M. External Marker Input Provision

N. RF equivalents of all IF and chroma markers are available in the Ch. 4 and Ch. 10 sweep functions.

5. Separate Bias Supplies (3)

(Low impedance for all-tube, hybrid or solid state sets.)

- A. 2 each: 0-25 V DC reverse polarity for solid-state sets
- B. 1 each: 0-50 V DC reverse polarity

6. Dimensions

- A. Height: 9"
- B. Width: 17 $\frac{5}{8}$ "
- C. Depth: 10 $\frac{5}{8}$ "
- D. Weight: 23 lbs.

7. Power Requirements

- A. 105-125 VAC, 60 Hz (3-w. line cord)
- B. Power Consumption: 25 Watts

There IS a difference in Test Equipment. Ours works...

Diagnostic Oscilloscope/Vectorscope

B&K Model 1450B



*... an oscilloscope with
Vectorscope feature ...
also the world's first and
only scope designed
to locate elusive
intermittents quickly and easily*

THE ELUSIVE INTERMITTENT SIGNAL! How many man hours have been spent trying to locate the source of the problem? How much time was invested in testing each and every circuit, when more productive work could be accomplished?

The 1450B is a deluxe instrument in every respect, and the easiest-to-use professional scope ever designed. Color TV and solid state circuits demand very sophisticated test equipment; this unit, with its unique engineering features, achieves A-1 professional status and, in conjunction with the Model 415 Sweep/Marker Generator, it is an ideal companion unit for alignment purposes.

A plus feature of the 1450B is the convenient front panel location of the Vectorscope inputs and controls. These inputs are fed thru a controlled amplifier that allows troubleshooting all the way through to the demodulator . . . the only Vectorscope with this capability. It also shows vector patterns exactly as specified by color TV manufacturers.

ONLY THE 1450B OFFERS ALL THESE FEATURES

- Intermittent analyzer with visual indicators and electronic memory, plus optional intermittent remote alarm.
- Advanced design sync separator circuit provides automatic separation in TV sweep position.
- Reads peak-to-peak voltages in all ranges with just the turn of a switch.
- Separate peak-to-peak scales illuminate individually as range is selected.
- All patterns lock-in automatically at any signal level.
- Built-in calibration permits calibrating all ranges in a single step.
- Frequency compensated step attenuator—7 steps in 1.3 ratio give an over-all accuracy better than 5%.
- Vectorscope inputs and controls located conveniently on front panel.
- Single knob controls most TV applications.
- Horizontal sweep frequencies in excess of 500 KHz.
- Sufficient sweep expansion to observe at 5 MHz signal.

PR-14 Direct/Low Capacity 10:1 Probe included.

Model 1450B Oscilloscope/Vectorscope. Net: \$299.95

Exclusive Intermittent Analyzer for All Electronic Circuitry

Model 1450B

Easiest-To-Use Scope Ever Designed

Vectorscope

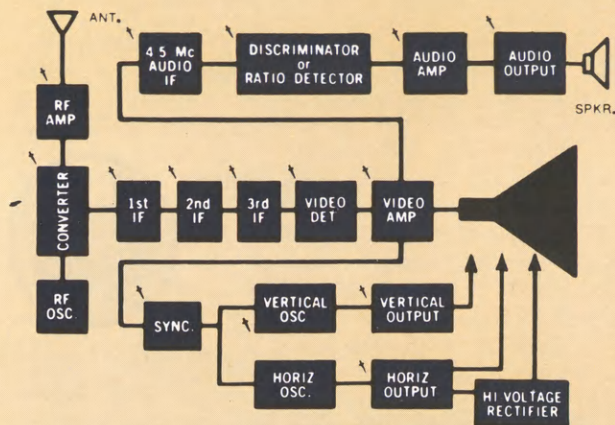


Typical Vector Pattern

Automatic Sync



Composite TV Signal



How the 1450B Locates Intermittents

A temporary component failure anywhere along the signal path shown in the block diagram could cause an intermittent. Normal trouble-shooting of an intermittent requires the technician to monitor the set while waiting for the intermittent to occur. The 1450B's Intermittent Analyzer lets you insert the probe at any point in the signal path shown above and then turn to other work. If a change in the signal occurs, the intermittent lamp will turn on. Even if you are on call — and the condition corrects itself before you return — the "electric memory" will keep the lamp lit to advise you the circuit was intermittent. By moving the probe from stage to stage, you isolate the stage causing the intermittent — and with no time wasted monitoring a trouble-free circuit.

Model MON-45 Audio-Visual Accessory Monitor for 1450B

With this unique MON-45 monitor, you can leave the chassis being tested, knowing that when a change in signal takes place, the MON-45 will "call" you by flashing its 10 $\frac{1}{4}$ x6 $\frac{1}{2}$ " glass "sign" and sounding a built-in buzzer. A great time saver! Shpg. wt., 4 lbs.
Model MON-45 Monitor. Net: \$24.95

The 1450B is ideal for all shops — large or small . . .

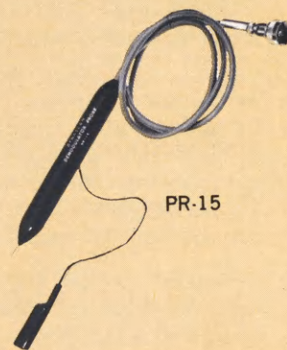


Crystal Demodulator Probe—1450B Accessory

Optional accessory for use with the 1450B Diagnostic Oscilloscope. Excellent for retrieving modulation information from high-frequency carriers when checking CB and other communications equipment. Not supplied with the 1450B. Shpg. wt., 8 oz.

Model PR-15.

Net: \$12.95



SPECIFICATIONS

INTERMITTENT ANALYZER:

Sensitivity: Proportionate to amplitude of signal. Variable from ± 10 to $\pm 50\%$ of signal.

Analyzer Bandwidth: 5 Hz to 5 MHz.

VERTICAL AMPLIFIER

(3-stage, push-pull):

Sensitivity: 25 millivolts rms/inch. 70 millivolts peak-to-peak/inch.

Undistorted Deflection: Greater than 6".

Positioning: ± 2 ", minimum.

Bandwidth: 5 Hz to 5 MHz (down 1 db at 4.5 MHz).

Rise Time: 120 nanoseconds or better.

Overshoot: Less than 10%.

Input Impedance: 3 megohms shunted by 47 mmf maximum.

Vertical Input Step Attenuator: 7-step, frequency-compensated.

HORIZONTAL AMPLIFIER (Push-Pull):

Sensitivity: 0.5 volt rms/inch or better.

Bandwidth: Within 3 db, 2 Hz to 750 KHz.

Input Impedance: 5 megohms minimum shunted by 30 mmf.

Inputs: Internal linear time base; Phased 60 Hz; External.

Trace Expansion: 2 times screen diameter.

Position: Any portion of trace can be placed on screen.

Frequency Range: 5 Hz to 500 KHz sawtooth in 5 over-lapping ranges. TV-Vertical and TV-Horizontal positions have automatic sync separator.

Synchronization (Automatic in all modes): + Internal and — Internal; Phased 60 Hz; External.

OTHER FEATURES AND SPECIFICATIONS:

Intensity Modulation: Blanking on positive signal excursion.

Retrace Blanking.

Power Requirements: 117 VAC, 60 Hz; also available for 117/230 VAC 50-60 Hz.

3-Wire Line Cord.

Dimensions: 17 $\frac{1}{4}$ x 13 $\frac{3}{8}$ x 8 $\frac{3}{8}$ " wide

Weight: 34 lbs.

Shows vector patterns exactly as specified by color TV manufacturers . . .

NEW! Deluxe I. C. Digital Color Generator

B&K Model 1246—Includes "Instant-Use" Carrying Case

Model 1246 in
"Instant-Use"
Carrying Case



*Produces 9 patterns,
including center dot, 1x9
and 9x1 Crosshatches . . .*

Easily Carried
or Fits
in Caddy



Case Easily Removed
for Shop Use

all new . . . broadcast station stability . . .

Integrated flip-flop circuits
perform all counting functions . . .

An all-new, integrated circuit, digital color generator with true broadcast station stability! The 1246 is the most advanced unit in the field today, offering totally new engineering concepts—not just minor improvements over previous models. For checking convergence, color, linearity, size and focus, the 1246 is unequalled. And here's why:

Integrated Digital Flip-Flop Circuits. Perform ALL counting functions—for patterns so rock-steady, you'd think you were looking at a still photo instead of a CRT image!

Ultra-Stable Sync and Video Pulses. Synthesized from count-down chain by logic elements which accurately "compute" the proper signal. Selector switch then "programs" the proper pattern, "frozen" motionless on the CRT.

Unique Mixer Circuit. Algebraically adds all the synthesized pulses to produce a composite video signal that closely approximates TV standards. This signal is then injected into a modulator that produces a high modulation percentage, insuring sharp, clear patterns on the screen of the television set under test.

All-Silicon Circuitry. All IC's and transistors are silicon types, for reliable performance over a phenomenal temperature range.

Crystal-Controlled Oscillators. Maximum stability is further insured by use of precision crystals in both the master count-down oscillator and the color oscillator. In addition, the 1246 has crystal-controlled picture carrier oscillators for channels 3 and 4. There's never a question in your mind about the stability and accuracy of the carrier!

Adjustable Dot and Line Width. Both dot and vertical line width are fully adjustable by the user, although preset to an optimum "average" at the factory.

Regulated Power Supply. The Power supply is transformer-isolated, full-wave rectified and transistor-zener regulated. Delivers ripple-free voltage at all times; eliminates expensive battery replacement costs and operational failure just when you need the unit on a job.

9 Rock-Steady Patterns. The 1246 produces a total of 9 patterns: Purity, 9 x 9 Dots, Center Dot, 9 x 9 Crosshatch, 1 x 9 Crosshatch, 9 x 1 Crosshatch, Crosshair, Gated Rainbow and the R—Y, B—Y —(R—Y) pattern. With all these important patterns, you can check every performance factor of any color TV set—with ease!

Exclusive New "Instant-Use" Carrying Case. Only B & K gives you this very handsome, practical carrying case—to protect your valuable instrument and to increase your efficiency when using it in the field. When using the 1246 in the field, all you do is snap open the front flap, fold it under, and the front panel is ready for use. Open the rear flap, and the cables are at your disposal. For bench use in the shop, case is easily removed. Handsome black, high-quality, heavy-gauge simulated leather, with white stitching and strong, reliable snap-latches . . . a practical, worthwhile extra feature.

The Model 1246 is an outstanding example of B & K engineering with the user in mind. All features and specifications are based upon thorough analyses of user requirements. The 1246 combines broadcast stability with solid state reliability; versatility with ultra-compactness for maximum usability at workbench or in the home; latest state-of-the-art circuitry with ruggedness and ease of use. Add to all this the B & K exclusive "Instant-Use" Carrying Case, and it's easy to see why the 1246 will make your color TV set servicing much simpler—and a lot more profitable!

Model 1246 Deluxe Color Generator.

Net: \$149.95

The new standard of stability . . .

MODEL 1246 DELUXE I.C. DIGITAL COLOR GENERATOR SPECIFICATIONS AND PATTERNS

LINE WIDTH

Horizontal: 54 microseconds.

Vertical: Preset to .25 microseconds; internally adjustable, .1 to .8 microseconds.

CHROMA

Offset Sub-Carrier System: Utilizes frequency of 3.579545 Hz—1 H (15,816 Hz), or 3.563729 MHz, $\pm .001\%$. Ten bars and R—Y, B—Y, —(R—Y), are produced by gating with 189 KHz and 63 KHz, respectively.

Sub-Carrier Level: Adjustable from 0-200% with front panel control.

RF OUTPUT

Channels: Crystal-controlled 3 (61.25 MHz) and 4 (67.25 MHz); both $\pm .005\%$. Selected by front panel slide switch.

Tuning Aid: 4.5 MHz unmodulated carrier, $\pm .2\%$. Fixed injection level of 30% total modulation excursion.

GUN KILLERS

Red, blue and green front panel gun killers, with 4 ft. cable.

SIGNAL SYNTHESIS

Progressive Scan System: Utilizes digital binary logic elements to derive all sync and video information. Countdown chain is synchronized to crystal-controlled frequency of 189.800 KHz, $\pm .005\%$.

Composite Video Signal: Approximates TV broadcast standards:

| | | | | |
|--------------|----------------------|------------------|---------------------|---------------------|
| | Sync | Frequency | Pulse Width | |
| | Horizontal | 15,816 Hz | .08 H (5.4 μ s) | |
| | Vertical | 59.91 Hz | 4 H (253 μ s) | |
| Blank | Total | | Front Porch | Back Porch |
| Horizontal | .145 H (9.2 μ s) | | — | .06 H (3.8 μ s) |
| Vertical | 16 H (1012 μ s) | | 4 H (253 μ s) | 8 H (506 μ s) |

MECHANICAL

Size: 2¼ x 7 x 10¾" deep.

Shpg. Wt.: 4 lbs.

Cable Storage: 30 cu. in.

Power Requirements: 100-130 VAC, 50/60 Hz.

Operating Range: —20°F. to +140°F. with no performance degradation.



Purity

Pattern No. 1. Provides sync and an ultra-clean "reference black" level to provide a clear raster.



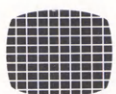
9 x 9
Dot Pattern

Pattern No. 2. For checking convergence, 9 x 9 sharp, well-defined dots are produced. Dot width adjustable by user.



Center Dot

Pattern No. 3. Center dot simplifies static convergence, because it automatically pinpoints screen center and is located quickly when working from behind the receiver.



9 x 9
Crosshatch

Pattern No. 4. The 9 x 9 crosshatch is universally employed in dynamic convergence, linearity, size and overscan adjustments.



1 x 9
Crosshatch

Pattern No. 5. The 1 x 9 pattern is especially useful when adjusting dynamic convergence on left and right sides (at center vertically).



9 x 1
Crosshatch

Pattern No. 6. When performing convergence on top and bottom of picture, the 9 x 1 pattern is very useful, because it eliminates all but the center vertical line.



Crosshair

Pattern No. 7. The crosshair aids in "roughing-in" static convergence and checking deflection centering.



Gated
Rainbow

Pattern No. 8. Ten color bars, gated at 30° intervals, used in testing and aligning color circuits. Sharp edge definition is assured by a unique "reference black" background.



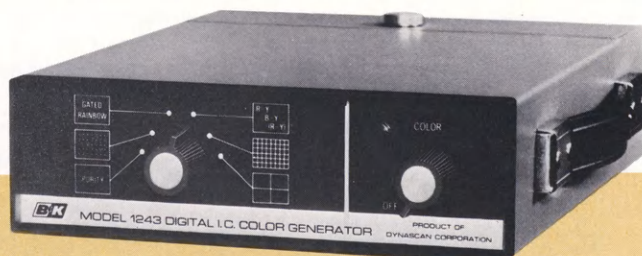
R—Y, B—Y,
—(R—Y)

Pattern No. 9. Three color bars, gated at 90°, 180° and 270°—for expediting certain color alignment procedures.

NEW! Model 1243 I.C. Digital Color Generator

6 Jitter-Free Patterns

Here's another new color generator from the labs of B & K—at a budget price. It gives you broadcast station stability, 6 jitter-free patterns and all-silicon solid-state circuitry—for less than \$100.00! Digital flip-flop circuits are used for all counting functions. Precision crystals are used in both the master countdown and color oscillators. Both dot and vertical line width are fully adjustable, although factory preset to an optimum "average." And you get the six most important patterns: Purity, 9 x 9 Dots, Crosshatch, Crosshair, Gated Rainbow, and R—Y, B—Y, —(R—Y) pattern (see Patterns No. 1, 2, 4, 7, 8 and 9 above). Regulated power supply delivers ripple-free voltage at all times; eliminates costly battery replacement and operational failure just when you need the unit on a job. The 1243 fits in most tube caddies, yet it's ruggedly made to withstand the rigors of day-in and day-out use.



SPECIFICATIONS:

RF Output: Tunable to channels 3, 4 or 5; factory-tuned to 3 (61.25 MHz).

Operating Range: From —20° F. to +140° F., with no degradation in performance.

Power Requirements: 100-130 VAC, 50/60 Hz.

Size: 2¼ x 7 x 9¾".

Shpg. wt.: 3½ lbs.

Cable Storage: 24 cu. inches.

Model 1243 I.C. Digital Color Generator. Net: \$99.95

The new standard of stability...

NEW! 100% Dynamic Gm Tube Tester

B&K Model 747 Solid-State "Dyna-Jet"



tests all tubes with true dynamic mutual conductance test . . .

The ideal tube tester should (1) have a high-speed section for testing the tubes most often used in radio and TV; (2) be obsolescence-proof; (3) test all amplifier tubes with a true dynamic mutual conductance test; and (4) be 100% solid state for instant-on operation and trouble-free service through long life. The new B & K 747 gives you all these features and more:

Jet-Check Section. The vast majority of TV-radio tubes can be checked in this section at very high speed. Only two settings are required: HEATER and SENSITIVITY. There are 21 pre-wired sockets and for the most popular types, the settings are shown next to the sockets. One push-button gives a direct reading of the tube's mutual conductance in terms of BAD?-GOOD.

Programmed Section. Less popular tube types are tested for dynamic mutual conductance here. A program switch for each tube pin sets up the test circuit. This eliminates obsolescence: New tube types that cannot be checked in the Jet-Check section can be tested here with the new tube data provided as they are introduced. One reset lever resets all program switches simultaneously, speeding new set-ups.

Diodes and Rectifiers. These non-amplifying tubes are tested for emission, which is the only way they can be tested. Again, the most popular types are tested in the Jet-Check section for speed.

High-Voltage Regulators. The 747 is the only tube tester that provides an effective dynamic test for voltage regulators that separates the good VR's from the bad ones. Most other testers either are unable to detect bad VR's, or may destroy the tube under test. Size, 5 $\frac{1}{4}$ x 20 $\frac{1}{2}$ x 11 $\frac{1}{2}$ " deep. Operates from 105-125-VAC, 60 Hz. Shpg. wt. 12 lbs.

Model 747 Dynamic Gm Tube Tester.

Net: \$249.95

OTHER TESTS AND FEATURES

Shorts and Leakage. Leakage paths up to 1 megohm will light the SHORTS lamps; meter detects leakage current as low as 0.5 microamp.

Grid Emission Test. Single push-button checks for gas, grid emission and grid-to-cathode leakage. Grid leakage paths up to 100 megohms easily detected on meter.

Life Test. For preventive maintenance and to reduce call-backs, a qualitative life expectancy test is made with the flip of a switch.

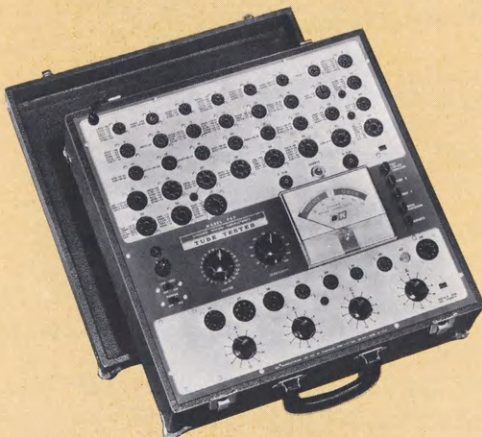
Multi-Section Tubes. Each section is fully tested separately.

Patented Automatic Line Voltage Compensation. A B & K exclusive, insures reliable test results at all times.

Pin Straighteners. Six pin straighteners are provided on the panel.

Plastic Molded Case. Professional molded case, for light weight and ruggedness. A 100% transconductance tester, with every desirable feature—in an exceptionally handsome, yet very compact, black attaché-type case.

B&K Model 707 Dynamic Gm Tube Tester



30 Gm Sockets Plus "Dyna-Quick" Emission Test Section

The 707 combines dynamic mutual conductance tube testing with emission testing, to provide wide coverage, and very fast, reliable testing. The average set can be checked with equal ease in the home or shop. The Gm section has 30 pre-wired sockets, plus 5 quick-check sockets for rectifiers. The sensitivity setting is printed next to each socket, for all popular tube types. Only 2 controls to set, then push button and read the Gm directly on the large 4 $\frac{1}{2}$ " meter. Checks for shorts, grid leakage and gas, each with one button. Also, one-button "LIFE" test. Emission tube test section requires setting of only 3 controls—then push button to read emission at rated current load. One switch

for shorts test; one-button grid emission, gas and "LIFE" tests. TESTS: New and old color and B&W TV and radio tubes; Nuvisitors and Novars; both types of 10-pin tubes; 12-pin Compactrons; hybrid auto radio tubes; thyratrons; voltage regulators; European hi-fi tubes and most industrial tube types. Checks each section of dual-section tubes separately. Grid emission circuit adjustable through front panel; sensitivity, over 100 megohms. Socket contacts all are phosphor bronze for long life. For 105-125 VAC, 50-60 Hz. Size, 5 $\frac{7}{8}$ x 15 $\frac{3}{4}$ x 16 $\frac{1}{8}$ " D. Shpg. wt., 17 lbs.

Model 707.

Gm Tube Tester.

Net: \$209.95

High-Speed Solid-State Tube Tester

B&K Model 607 "Dyna-Jet"

EXCLUSIVE! Lockout pushbuttons open any tube's multiple-connected pins . . .

Here's the only tube tester in its price class that gives you positive SHORTS indication in any tube being tested. How many times have you been frustrated because the chart says, "Shorts normal" or "disregard shorts"? This is because there was no way of opening up the pin connections. The Model 607 Dyna-Jet provides 10 lockout pushbuttons that can open any and all multiple-connected pins in any tube under test. Reset button clears all lockouts.

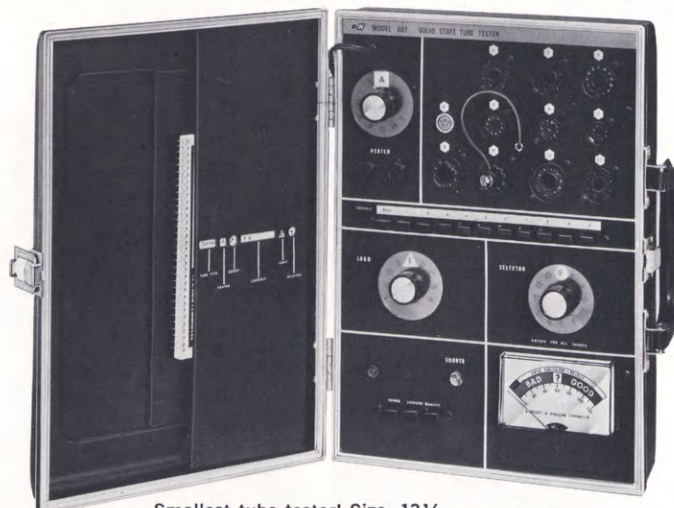
Set-up is fast and easy. Only 4—and in some cases 3—settings, for QUALITY test. Shape-coded symbols match control to chart, speed testing and eliminate typical human errors. Cathode emission is checked the accurate way—under simulated load conditions. Provides high-sensitivity grid emission and gas tests. The Dyna-Jet finds "tough dogs" and weak tubes easily. Also checks for leakage, gas. Phosphor bronze sockets insure long life. "Human-engineered" special chart with holder for fast, easy display. "Computer-styled" in professional-looking, black attache-type case, 13½ x 9½ x 4" deep. Operates from 105-125 VAC, 50-60 Hz. AC. Wt., only 6 lbs.

FEATURES

- Exclusive multiple-pin lockout pushbutton switches (10): Open any and all pins in tube under test—ALL tubes now can be tested for shorts; positively detect ALL shorts regardless of pin connections; eliminate all FALSE shorts. Reset button clears all lockouts.
- Tube testing speed doubled by (1) exclusive shape-coded symbols that match controls to chart, and (2) minimum number of settings—maximum of 4, and in some instances, only 3 are required.
- Checks tubes accurately—under simulated load conditions.
- Exclusive grid leakage and gas tests.
- Simplified heater voltage setting.
- Power "ON" indicator.
- Superior load and plate voltage capability.

Model 607 Dyna-Jet.

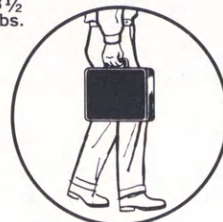
Net: \$119.95



Smallest tube tester! Size, 13½ x 9½ x 4". Carrying wt., 6 lbs.

TESTS

Newest tube types—plus all old types used in TV and radio, including Nuvistors, Novars, Magnovals, new 10-pin tubes and 12-pin Compactrons. Also, auto radio hybrids, imported hi-fi tubes and many industrials, specials.



**handsome
attache-type
case**

NEW TUBE INFORMATION SERVICE

Published every 4 months. Available on annual subscription basis at the following cost: For all B&K testers except the 747, \$5.00 per year. For the 747 "Dyna-Jet" Gm Tube Tester, \$6.00 per year.

B&K Model 606 "Dyna-Jet" Quick-Check Tube Tester

Low-Cost Tube Checker for Radio, Color and B & W TV Tubes

The 606 has been the "old reliable" tube tester in service shops across the country for many years. It's easy to use, extremely rugged, and it provides the sockets and features you need to service current-model sets as well as the older ones.

FEATURES

- 13 sockets for maximum coverage.
- Only 3 controls to set—then push "QUALITY" button—that's all there is to it!
- Rotate one switch to test for all SHORTS.
- Tests emission at current loads that simulate actual operating conditions.
- Checks each section of multi-section tubes.

The 606 checks for all SHORTS, leakage and gas—as well as grid emission—under simulated load conditions. Grid emission circuit is adjustable through front panel; has sensitivity of over 100 megohms. Molded tube sockets have phosphor-bronze contacts for long, trouble-free life. Complete tube listings are provided in a handy reference index stored in the cover. TESTS: Latest color and B & W TV tubes and radio tubes; Nuvistors, Novars, both types of 10-pin tubes; 12-pin Compactrons; European hi-fi tubes; voltage regulators and many industrial types. Size: 4⅞ x 11 x 8½"D. For 105-125 VAC, 50-60 Hz. Shpg. wt., 8 lbs.

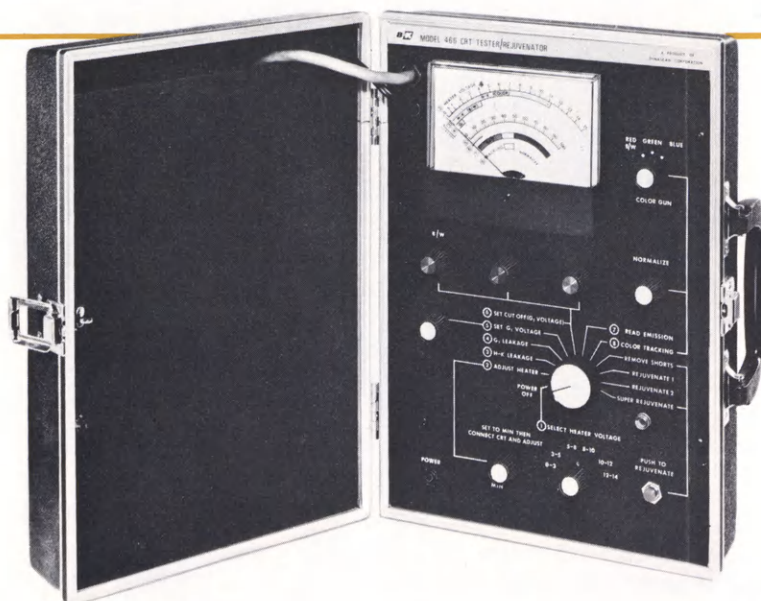
Model 606 Tube Tester. Net: \$89.95



CRT Tester and Rejuvenator

B&K Model 466

...Tests New CRT's, Including Trinitrons



WHAT THE MODEL 466 WILL DO

- Rapidly tests CRT's for opens, shorts or leakage between elements, without removing tube from set.
- Checks cathode emission of each gun separately; quickly evaluates tracking of guns in a color picture tube.
- "Reserve Power" rejuvenation restores low-emission CRT's; repairs shorted or leaky tubes. "Super-Rejuvenate" feature permits rejuvenation of many otherwise worthless tubes.
- Checks warm-up performance; makes relative useful life test.
- With 3 multi-socket adapters provided, tests new CRT's such as Trinitrons, and the GE 11SP22 and 11WP22.

- Separate G-2 control for each color gun
- Monitored rejuvenation—see what you are doing

A new, professional-quality black-and-white and color CRT Tester/Rejuvenator, with all the proven, valued features of its predecessors and new features reflecting the latest advances in the state of the art. From the laboratories of B & K, originators of CRT Tester/Rejuvenators in 1954—another industry pacesetter!

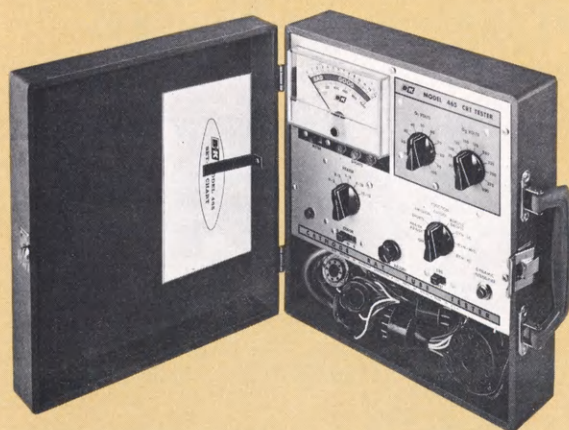
MAJOR FEATURES

- Tests all CRT's in accordance with manufacturers' recommended procedures. Unlike other CRT testers, no tube elements are allowed to "Float free." In all test modes, key CRT elements are connected to test points, all others are shorted to ground. Insures greater accuracy, eliminates damage to CRT.
- Separate G-2 control for each color gun. Sufficient G-2 voltage range to check color CRT guns to cut-off with recommended G-1 voltage setting. Accelerates tracking tests.
- "Normalize" control greatly simplifies evaluation of color gun tracking.
- G-1 voltage measured directly on meter; permits setting to accurate G-1 voltage under all conditions.
- Monitors heaters right at tube pins—gives precise indication of heater voltage on meter. Insures setting correct heater voltage regardless of heater load or line voltage variations.
- Exclusive monitored rejuvenation permits reading relative cathode emission improvement directly—saves time, provides accurate rejuvenation for maximum picture tube life.
- Unique "Super-Rejuvenate" function for restoring emission of otherwise worthless CRT's, with high-energy "shock treatment."
- Human-engineered front panel simplifies step-by-step testing.
- Large $4\frac{1}{2}$ " meter is numerically coded to panel controls for fast, accurate readings.
- Continuously variable and metered, heater, G-1 and G-2 voltages. Effectively protects the 466 from being obsoleted by new CRT's with new heater voltages; permits checking CRT's under actual operating conditions for reliable test results.

Oversize storage compartment holds all adapters, manual, charts plus small tools. Handsome, lightweight, computer-styled, attache-type carrying case. Size, $13\frac{1}{4} \times 9\frac{1}{2} \times 5\frac{1}{4}$ " deep. Complete with 3 multi-socket adapters. Operates from 105-125 VAC, 50-60 Hz. Shpg. wt., 8 lbs.

Model 466 CRT Tester/Rejuvenator.

Net: \$129.95



CRT INFORMATION SERVICE

Covers all B & K CRT testers—specify model no. Each new chart complete in itself; lists CRT's commonly used, plus new types, as data becomes available. Issued twice a year. Annual subscription: \$4.00.

Model 465 CRT Tester and Rejuvenator

Recognized standard of the industry for testing and repairing CRT's—both black-and-white and color—right in the TV set. An outstanding value that will make money for any service shop.

FEATURES: Continuously variable element voltages match CRT's in new transistorized TV sets. Heater voltages metered and adjustable, 0-13 volts. G-1 voltage, 0-100; G-2, 25-300 volts. Checks for leakage, shorts, opens; emission. Large $4\frac{1}{2}$ " meter for fast, easy readings. Two- and 4-minute tests for color tube warm-up checks. Repairs inter-element shorts and leakage. Restores emission and brightness with precision timing circuit for maximum safety. Life test checks cathode emissive coating, predicts remaining useful life of CRT.

Supplied with CR-60 and CR-61 adapters. Operates from 105-125 VAC, 50-60 Hz. Size, $10\frac{1}{2} \times 11\frac{1}{2} \times 4\frac{1}{2}$ " D. Shpg. wt., 9 lbs.

Model 465 Tester/Rejuvenator.

TESTS AND REJUVENATES

- Color CRT's, including the new rectangular 25", 23", 21", 19", 16" and the standard 21".
- All picture tubes, with correct filament voltage—adjustable 0-13 volts.
- All high G-2 and low G-2 picture tubes, including the new low-beam current types.
- GE 11" color CRT's and imported color CRT's—with inexpensive optional adapters.

ADDS SERVICE INCOME 2 WAYS:

- 1—Tests and repairs color and black-and-white CRT's right in the home.
- 2—Makes new CRT sales much easier.

Net: \$99.95

Transistor/F.E.T. Tester

B&K Model 162

*...fastest, general purpose,
solid-state device
tester on the market*

THE MOST SIMPLIFIED METHOD OF TESTING TRANSISTORS AND FIELD EFFECT TRANSISTORS IN-CIRCUIT AND OUT-OF-CIRCUIT USING SAME BASIC PROCEDURE! This new transistor tester concentrates the basic test features of a solid state, easy-to-use testing laboratory in one compact unit.

It's extremely easy to operate. By using the instructions with indicated general Go-no-Go tests, you can instantly tell if the device you are testing is or is not the cause of the defect. Unique DC injection provides more accurate in-circuit tests, especially with low impedance balancing circuitry. Makes tests under appropriate current conditions to give more accurate readings. Five selective current ranges, plus high-sensitivity meter with expanded scale on $4\frac{1}{2}''$ dial for easy reading.

Model 162 Transistor/F.E.T. Tester.

Net: \$99.95

162's Eight Exclusive Features

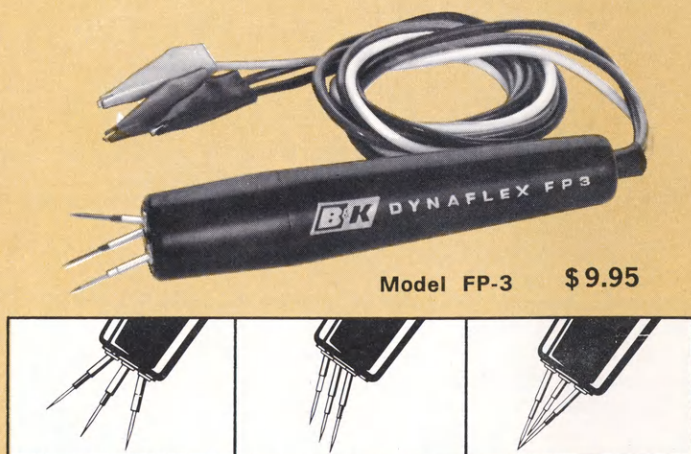
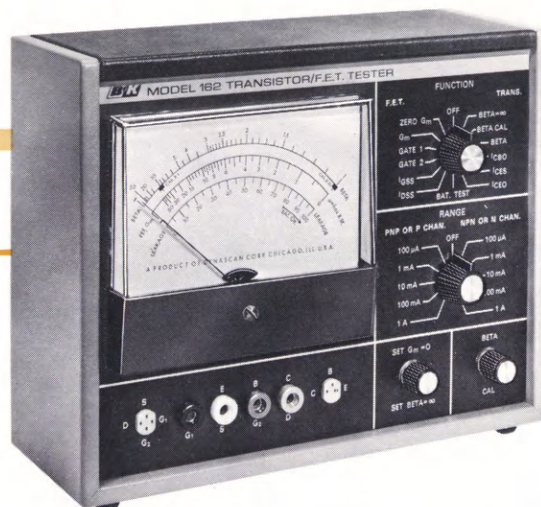
- **SPECIAL BALANCING CIRCUIT:** Permits balancing out as low as 6 ohms circuit impedance for in-circuit Beta test.
- **HIGHER CURRENT CAPABILITIES:** Up to 1 ampere. You need this for testing power transistors and power FETs.
- **THREE TRANSISTOR LEAKAGE TESTS:** I_{CBO} , I_{CEO} , I_{CES} . Finds failures missed by other transistor testers. Especially "avalanche mode" breakdown failures, common in horizontal

output stages or any power stages.

- **TESTS:** Diodes, Unijunctions, SCR's and Triacs.
- **CORRECT BETA READING:** from 1-5000.
- **FRONT PANEL SOCKETS:** for conventional (bipolar) and FET transistors. Especially useful for FET test, minimizes possibility of damage due to static charges.
- **SEPARATE CHECKS:** Checks Gate 1 and Gate 2 of dual gate FETs separately.
- **PROGRAM SELF-CONTAINED INSTRUCTION GUIDE:** Provides instruction on Go-no-go conditions for Beta and leakage. Eliminates need for bulky transistor reference manuals.

Specifications

1. **Collector Current:** 100 microamperes to 1 ampere in steps of 10.
2. **Collector Voltage:** Constant $1\frac{1}{2}$ volts.
3. **Beta:** 1 to 50 and 10 to 500 (readings to 5000).
4. **Leakage:** 5 ranges in steps of 10 from 100 microamperes to 1 ampere.
5. **Measures:** I_{CBO} , I_{CES} , I_{CEO} , I_{GSS} , Beta, Gm.
6. **Gm:** 0 to 50,000 microhms.
7. **Sockets:** Front panel for FET and bipolar transistors.
8. **Jacks and Test Leads:** Color coded.
9. **Meter:** $4\frac{1}{2}''$, high sensitivity.
10. **Case:** Rugged steel.
11. **Size:** 9" wide x $7\frac{1}{4}''$ high x 4" deep.
12. **Weight:** 6 lbs. 12 oz. w/batteries.



Dyna-Flex Probe Model FP-3

...fast, one-handed in-circuit testing

WITH THE DYNA-FLEX PROBE, THE ONLY CONTACT POSSIBLE IS POSITIVE. That's because the tips of the three probes are spring loaded and needle sharp. Actually pierce the terminal solder. Allows you to adjust to any spacing $\frac{1}{32}''$ to $\frac{5}{8}''$ using only one hand. Permits rapid easy test access to densely packed miniturized circuit arrays. This unit eliminates costly unsoldering; can be used to make temporary component substitutions on printed wiring boards. Each print is color coded for fast easy identification. Use with Model 162 — or any VTVM, VOM, TVOM, or Transistor tester.

There IS a difference in Test Equipment. Ours works...

RF Generator

B&K-Precision Solid-State Model E200D



calibrated meter monitors RF level and % modulation

Newest-design, solid-state RF Signal Generator, with 100% silicon transistor circuitry and zener-regulated power supply. Extremely stable and accurate over long life. Ideal for TV trap and band-pass coil alignment; FM-AM receiver alignment; stage-by-stage RF amplifier gain tests; audio signal tracing; perfect for school and science labs; excellent signal source for industrial applications. Fully shielded—no spurious radiation. Accuracy of better than 0.1% possible with internal crystal calibration. 200-microamp d'Arsonval meter for accurate monitoring and setting of RF carrier and modulation levels. Crystal calibrator provides audible zero beat through built-in speaker.

FEATURES

- Wide-range coverage, 100 KHz to 216 MHz in 6 bands.
- Completely shielded RF output with continuously variable attenuation calibrated to less than 1 microvolt.
- Four outputs: Unmodulated RF; modulated RF; externally modulated RF; 400 Hz audio signal
- Covers full VHF TV range; can be used as crystal-calibrated marker.
- Line RF filter.
- Easy-setting, 5" vernier dial; anti-backlash 12:1 gear ratio.

SPECIFICATIONS:

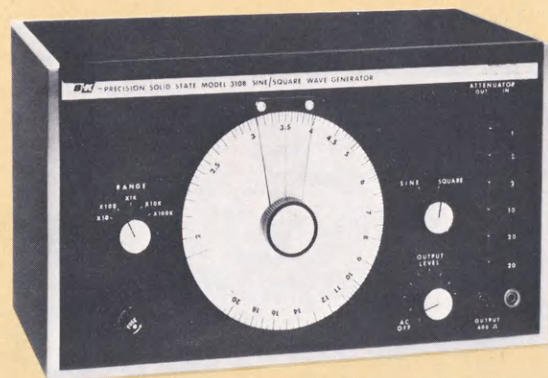
Frequency Range: 100 KHz to 54 MHz on fundamentals; 54-216 MHz on harmonics; 6 bands. **Accuracy:** $\pm 1.5\%$ of highest frequency of range used. With crystal calibrator, better than 0.1%.

Attenuator System: 6 individually shielded step attenuators, plus variable fine output level control. Output, -96 db; with fine o.p. level control and calibrated meter, -106 db. **Output Level Calibration Accuracy:** ± 1 db of nominal to 54 MHz. **Size:** $12\frac{3}{4} \times 7\frac{1}{4} \times 8"$.

Power Requirements: 110-130 VAC, 50-60 Hz; 6 w.; also available for 117-234 VAC, 50-60 Hz. Complete with 3-wire AC line cord and RF cable. Shpg. wt. 16 lbs.

B & K-Precision Model E200D Signal Generator. Net: \$189.95

B&K-Precision Model E310B Sine/Square Wave Generator



features step attenuation of both sine and square wave outputs

Latest version of the Sine/Square Wave Generator that has been the industry standard for many years. New solid-state circuitry: F. E. T. in oscillator, all-silicon transistors, zener-regulated power supply. Fully shielded—no spillover to other equipment. Large, easy-to-read 5" dial scale with 12:1 gear ratio drive—makes it easy to obtain and repeat the results you want. Ruggedly constructed to withstand day-in and day-out use in service shops, schools and labs.

SPECIFICATIONS:

Sine Wave

Frequency Range: 20 Hz to 2.0 MHz in 5 decade ranges: 20-200 Hz; 200 Hz to 2 KHz; 2-20 KHz; 20-200 KHz; 200 KHz to 2 MHz.

Output: 0-8 volts RMS into high-impedance loads; 0-7 volts RMS into 600 ohms; ± 1 db to 1 MHz; ± 2 db to 2 MHz.

Distortion: 0.1% typical; 0.25% maximum.

Square Wave

Frequency Range: 20 Hz to 200 KHz in 4 ranges: 20-200 Hz; 200 Hz to 2 KHz; 2-20 KHz; 20-200 KHz.

Rise Time: Less than 100 nanoseconds at 20 KHz.

Symmetry: Balanced within 5% or less.

Frequency Calibration Accuracy: $\pm 2\%$, 100 Hz to 2 MHz; $\pm 2\%$ (or one cycle) below 100 Hz.

Power Requirements: 110-130 VAC, 50-60 Hz; 15 watts. Also available for 117-234 VAC, 50-60 Hz.

Size: $12\frac{3}{4} \times 7\frac{1}{4} \times 8"$ deep. Shpg. wt. 11 lbs.

B & K-Precision E310B Sine/Square Wave Generator.

Net: \$119.95

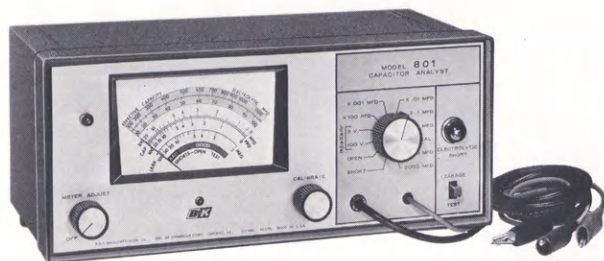
APPLICATIONS

- Amplifier, P.A. testing; loudspeaker resonance tests.
- Input/output impedance measurements.
- Modulation of RF signal generators.
- Synchronizing pulse generators.
- Oscilloscope voltage calibrator.
- Stage-by-stage amplifier gain tests.
- Alignment of broadcast receiver IF and RF stages, up to 2 MHz.
- Transmitter modulation response tests.
- Ultrasonic signal source.
- Student instruction.

In/Out-of-Circuit Capacitor Analyst

B&K Model 801

...quickly locates defective capacitors in-circuit/out-of-circuit



TESTS ELECTROLYTICS (Out-of-circuit only): Units rated up to 2000 mfd are tested with a circuit that automatically takes into account the electrolytic's inherent characteristics of equivalent series-parallel resistance. Only one lead of the capacitor is disconnected; the capacitor then is charged and discharged under load. Capacitor cannot be deformed by a reverse-polarity voltage.

For quick, accurate, capacitor testing both in- and out-of-circuit. Tests the following types: foil, mica, ceramic, general-purpose, temperature-compensating, and electrolytic capacitors. All out-of-circuit tests are made by disconnecting only one lead of the capacitor from the circuit.

TESTS FOR LEAKAGE: Measures leakage in-circuit with a unique 3-lead test, for accurate, meaningful readings. Two voltages available—3 volts and 100 volts. The same voltage can be used to measure leakage out-of-circuit—up to 50 megohms can be measured. **SHORTS:** Test results appear directly on GOOD-BAD scale. **OPENS:** Detects open circuits with a 20 MHz signal and a $\frac{1}{4}$ -wave transmission line. Reads directly on GOOD-BAD scale.

CAPACITANCE: The Model 801 accurately measures capacitance out-of-circuit of any capacitor with a rating of 3 VDC or more, 25 pfd to 100 mfd. Reads directly on meter scale. Power supply is line-isolated and meter is fully protected against overload. Supplied complete with cables and instruction manual. Size, $5\frac{1}{2}$ " high x $12\frac{3}{4}$ " wide and $6\frac{3}{4}$ " deep.

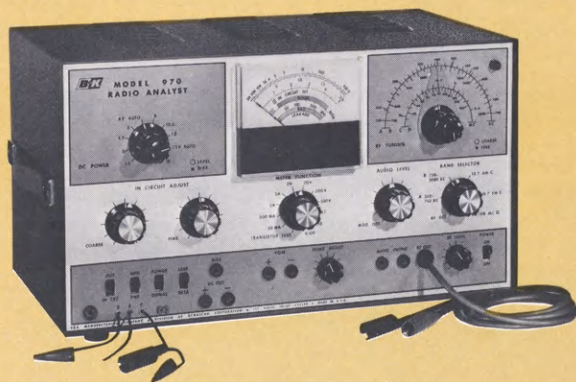
Rugged steel case. For 105-125 VAC, 60 Hz; also available for 117-234 VAC, 50-60 Hz. Shpg. wt., 11 lbs.

Model 801 Capacitor Analyst.

Net: \$ 119.95

B&K Model 970 Transistor Equipment Analyst

... the fastest way to check transistors



OTHER FEATURES

- Built-in power supply with 5 ampere output and low ripple. Output voltage, 1.5-15 volts in eight 1.5 volt steps, plus 6.8 and 13.6 volts for auto radios. Either plus or minus can be grounded. Fused input and output.
- Heavy-duty banana jacks insure reliable, trouble-free connections.
- 100% solid-state circuitry.

For testing FM, AM, auto, home and portable radios, transistorized TV sets and audio amplifiers—any solid-state circuitry. The 970 gives you everything you need to make transistor circuit servicing fast, uncomplicated and efficient (which means more money in the profit column). It's a complete lab in itself. No un-soldering of transistors or other components is required. Stage-by-stage trouble-shooting is a snap with the 970.

IN-CIRCUIT TEST: For quick checking of any stage of amplification, including transistorized power stages—at their normal working currents—without unsoldering anything.

OUT-OF-CIRCUIT TEST: Reads Beta directly on meter scale and also tests for leakage current. Both signal and power transistors are accurately measured at proper current levels.

GENERATOR OUTPUTS: 250 to 2000 KHz (AM); 10 to 11.4 MHz (AM or FM); 88-108 MHz (FM)—all with vernier tuning. Also, 400 HZ audio signal or modulation. AM modulation, not less than 30%; FM deviation not less than 70 KHz. Audio output level adjustable and suitable even for speaker testing. Individual modulation and RF controls.

Complete with cables and instruction manual. Size, $8\frac{1}{2}$ " H, $15\frac{1}{2}$ " W, 9" D. For 105-125 VAC, 60 Hz. Also available for 117/234 VAC, 50-60 Hz. Shpg. wt., 26 lbs.

Model 970 Transistor Equipment Analyst.

Net: \$229.95

NEW! Solid-State F.E.T. VOM

B&K Model 179



- **100% F.E.T. solid state for maximum accuracy, stability**
- **55 ranges, including AC current**
- **Diode input protection**
- **Internal voltage regulation**

Put it to the Test!

Get drift-free accuracy, wideband AC response and all the versatility of a standard VOM in the new Model 179 F.E.T. VOM. High input impedance minimizes circuit loading. AC response to 3 MHz. Reads DC volts, current; AC volts, current; and ohms, for a total of 55 ranges (plus dbm ranges).

Input fully protected from over-voltage transients. Internal voltage regulation provides constant voltages, necessary for stable, accurate readings.

Large 4½" meter has a highly sensitive, 80-microamp movement. Mirror scale eliminates parallax.

Has convenient battery check—eliminates possibility of going out on a job with weak batteries. Uses 3 batteries (supplied).

Yes—put the 179 to the test—and you'll find it gives you greater accuracy and reliability than any other VOM in its price class!

SPECIFICATIONS

DC Volts: 8 ranges—0-0.3, 1.0, 3.0, 10, 30, 100, 300, 1000. (Convertible to -DC for an additional 8 ranges.) Input impedance, 10 megohms. Accuracy, $\pm 2\%$ typical, $\pm 3\%$ maximum. Over-voltage, maximum, 1000 VDC (0.3 V range).

DC Current: 8 ranges—0-30, 300 microamps; 1.0, 3.0, 10, 30, 100, 300 milliamps. Terminal voltage drop, 300 millivolts. Accuracy, $\pm 2\%$ typical, $\pm 3\%$ maximum.

AC Volts: 8 RMS ranges—0-0.3, 1.0, 3.0, 10, 30, 100, 300, 1000. 8 peak-to-peak ranges—0-0.84, 2.8, 8.4, 28, 84, 280, 840, 2800. Decibels: dbm (0 db = 1 mw, 600 ohms) —25.5 to +62 db in 8 ranges. Input impedance, 10 megohms. Input capacitance: 50 pf at 0.3 V range, 35 pf at other ranges, 80 pf with test cord. Frequency response: 25 Hz to 1 MHz at 0.3 V range; ± 0.5 db; 20 Hz to 3 MHz at other ranges, ± 1 db. Over-voltage, maximum, 600 VAC at 0.3 V range (RMS). Accuracy, $\pm 3\%$ typical, $\pm 4\%$ maximum.

AC Current: 8 RMS ranges—0-30, 300 microamps; 1.0, 3.0, 10, 30, 100, 300 milliamps. Terminal voltage drop, 300 millivolts. Accuracy, $\pm 3\%$ typical, $\pm 4\%$ maximum.

Ohms: 7 ranges—Rx1, x10, x100, x1K, x10K, x100K; x1 megohm. Center value, 10 ohms at Rx1 scale. Accuracy, $\pm 3\%$ of scale arc.

Meter Sensitivity: 80 microamps, DC.

Operating Range: 0-40° C.; 32-105° F.

Battery check provided.

Size: 5 x 7½ x 4¾". **Shpg. wt.,** 3½ lbs.

Case has stay-put handle; stays in position. Supplied complete with batteries, instruction manual and shielded test cord set.

Model 179 Solid-State F.E.T.-VOM.

Net: \$74.95

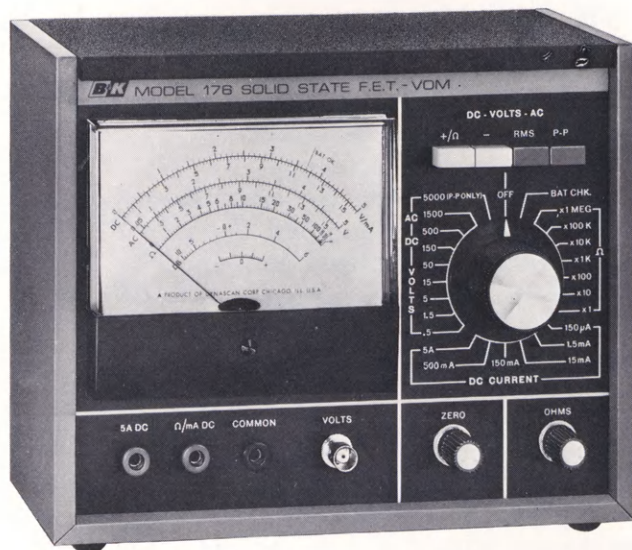
The new standard of stability . . .

B&K makes servicing easier, more profitable...

Solid-State F.E.T. VOM

B&K Model 176

the ideal VOM for shop, field and laboratory testing



The 176 has everything you want in a quality VOM: Stable accuracy, "instant-on," high-impedance input, field effect transistors for minimum loading—and the exclusive complementary symmetry circuit. Has 4½" meter; triple overload protection; steel case; BNC connector.

CHECK THESE SPECIFICATIONS:

DC Volts: 8 ranges; 0-5, 1.5, 5, 15, 50, 150, 500, 1500. Accuracy, $\pm 2\%$, full scale. Input impedance, 11 megohms.

AC Volts: 8 RMS ranges; 0-5, 1.5, 5, 15, 50, 150, 500, 1500. 8 Peak-to-Peak ranges; 1.5, 5, 15, 50, 150, 500, 1500, 5000. Accuracy, $\pm 3\%$, full scale. Input impedance, 10 megohms shunted by 65 pf on .5 volt range and 37 pf on all other ranges (measured at input jack). Frequency response: $\pm 1/2$ db, 9 Hz to 1 MHz.

Ohms: 7 ranges: Rx1, Rx10, Rx100, Rx1K, Rx10K, Rx100K, Rx1 Meg. Mid-scale reading, 10 ohms (Rx1 range). Accuracy, $\pm 3^\circ$ scale arc.

DC Current: 6 ranges: 0-150 μ a; 1.5, 15, 150, 500 ma; 5 amps. Measures down to microamps. Accuracy, $\pm 2\%$ full scale. Internal voltage drop, 200 mv.

Multipliers: 1% precision-type, frequency-compensated for AC.

Power Supply: Amplifier, two 9-volt batteries in series, regulated for constant 13 VDC. Ohmmeter, one 1.5 volt "C" cell.

Size, 7 x 9 x 3½" deep. Supplied with PR-17 probe; less batteries. Shpg. wt. 7 lbs.

Model 176 F.E.T. VOM.

Net: \$109.95

FEATURES

- Exclusive complementary symmetry circuit provides:
 1. Greater temperature stability.
 2. Identical calibration for plus and minus voltages.
 3. F.E.T. protection.
- Voltage-regulated power supply.
- True peak-to-peak AC measuring.
- Wideband AC response—to 3 MHz.
- 100% F.E.T. solid state for complete stability and "instant-on" operation.

Accessory Probes for Model 176

Model AV-3A RF Probe. Extends range of the 176 to 250 MHz. Shpg. wt., 1 lb. **Net: \$11.95**

Model AV-4A High-Voltage Probe. Multiplies all voltage ranges on the 176 by 100; extends range to 60 KV, invaluable for checking critical CRT anode voltage in color TV sets. Shpg. wt., 1 lb. **Net: \$15.95**



Model 120
2% ACCURACY

Models 120, 120M — Volt - Ohm - Milliammeters

Every test set-up should have a Model 120 VOM. Features a grand total of 61 ranges, including extra-low voltage and current ranges for checking transistors, and extra-high, 6000-volt range. Has extra-large, 5½" "wide-vision" meter with mirror scale (no parallax); burn-out proof, with transit meter movement protection. DC polarity reversing switch for quick front-to-back diode check.

SPECIFICATIONS

D.C. Volts: (20,000 ohms per volt) 0-0.3, 1, 2, 3, 12, 60, 300, 600, 1200, 6000.

AC Volts: (5000 ohms per volt) 0-1.2, 3, 12, 60, 300, 600, 1200, 6000.

Frequency Response: ± 1 db, 15 Hz-100 KHz. Usable to 500 KHz on low voltage ranges.

AC Output Ranges: 0-1.2, 3, 12, 60, 300, 600 (built-in 600-volt blocking capacitor).

DB Scales: 8 wide-frequency db ranges from -20 to +77 db (0 db=1mw, 600 ohms).

DC Current: 0-60, 300 microamps; 0-1.2, 12, 120, 600 ma; 0-12 amps.

Resistance: Mid-scale points: 2, 20, 2000, 20,000, 200,000 ohms.

Accuracy: DC, 2% full scale; AC, 3%.

Supplied with test lead set, less batteries. Size, 7 x 5⅜ x 3⅜". Shpg. wt., 4 lbs.

Model 120 VOM. **Net: \$69.95**

Model 120M—1½% Accuracy

As above, but 1½% accuracy on DC, 3% on AC. Precision ½% tolerance multipliers and shunts. Shpg. wt., 4 lbs. **Net: \$79.95**

Model TV-2C High Voltage Probe. Extends DC range of 120 and 120M to 30,000 volts. Shpg. wt., 1 lb. **Net: \$14.95**

Vacuum Tube Voltmeter

B&K Model 177



With DC/AC/Ohms Test Probe

The Model 177 VTVM is supplied complete with the PR-43 DC/AC/Ohms test probe, with switch and ground lead. Specially designed for the 177, it greatly speeds up circuit-checking and signal-tracing.

with DC supply for resistance ranges—no ohms battery needed . . .

FEATURES

- Built-in DC supply—no ohms battery required.
- Special .5 volt DC scale for solid state measurements.
- Separate peak-to-peak and RMS scales.
- Special calibration on low AC ranges.
- Special DB scale for amplifier gain measurements.
- Zero center scale for FM alignments.
- Large 7" mirrored meter for easy reading.
- Single high-impact Cycloc Probe with heavy-duty switch.
- 1% precision resistors in all critical circuits.
- DC polarity reversal switch.

SPECIFICATIONS

DC Volts: ± 0.05 , 1.5, 5, 15, 50, 150, 500, 1500.

AC Volts (RMS): 0-1.5, 5, 15, 50, 150, 500, 1500.

AC Volts (Peak-to-Peak): 4, 14, 40, 140, 400, 1400, 4000.

Response: ± 1 db, 40 Hz to 3 MHz (600 ohm source, 5 volt range).

Resistance (Full Scale): 1000, 10,000, 100,000 ohms; 1, 10, 100, 1,000 megohms.

Resistance (Mid-Scale): 10, 100, 1000, 10,000, 100,000 ohms; 1, 10 megohms.

Input Resistance: 11 meg (1 meg in probe).

Accuracy: DC, $\pm 3\%$ full scale; AC, 5%.

Meter Sensitivity: 100 microamperes.

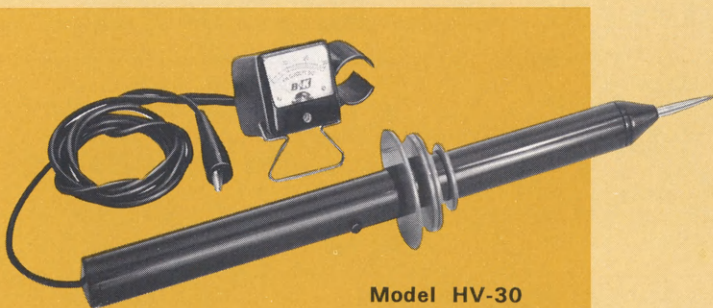
Built-in DC Supply: No ohmmeter battery required.

Power Requirements: 105-125 VAC, 50-60 Hz.

Size, $7\frac{1}{8}'' \times 7\frac{1}{4}'' \times 3\frac{5}{8}''$. Shpg. wt., 8 lbs.

Model 177 VTVM.

Net: \$89.95



Model HV-30
Net: \$24.95

Dyna Probe Model HV-30

...high voltage analyst with detachable meter

LIGHTWEIGHT AND FULLY PORTABLE! Provides fast, precise measuring of critical high voltages in color and black and white TV sets. The $1\frac{3}{4}''$ meter has clip-on mount to permit convenient removal from the probe. Extremely useful when making measurements in tight spots, or when meter is obscured. The instrument is factory calibrated at 25,000 volts. Accuracy is $\pm 2\%$ at 25,000 volts; $\pm 3\%$ at full scale overall. Shpg. wt. 2 lbs. Complete with case, leads, instruction book.

B&K field-proven, dependable, long-term performance...



Alignment Generator, VOM, VTVM and Oscilloscope

Accessories

RF Probes

Model AV-1A. RF probe for use with B&K Model 175 VTVM, Model 177 VTVM and Model 375 VTVM. Extends frequency range to 250 MHz. Shpg. wt., 1 lb. **NET: \$7.95**

Model AV-3A. RF probe for use with B&K Model 176 VOM. Extends frequency range to 250 MHz. 1 lb. **NET: \$11.95**

High-Voltage Probes

Model AV-2A. High-voltage probe for use with B&K Model 175 VTVM, Model 177 VTVM and Model 375 VTVM. Extends DC voltage range to 60,000 VDC. Shpg. wt., 1 lb. **NET: \$14.95**

Model AV-4A. For use with B&K Model 176 VOM. Multiplies voltage ranges by factor of 100. Extremely useful in color TV servicing, where CRT anode voltage is critical. Shpg. wt., 1 lb. **NET: \$15.95**

Model TV-2C. For use with B&K Model 120 VOM and 120M VOM. Extends DC voltage range to 30,000 VDC. Shpg. wt., 1 lb. **NET: \$14.95**

Demodulator and Other Probes

Model PR-14 Direct/Low Capacity Probe. Exact replacement for 10:1 probe furnished with B&K Model 1450 Diagnostic Oscilloscope. Shpg. wt., 1 lb. **NET: \$12.95**

Model PR-15 Crystal Demodulator Probe. For viewing RF and IF modulation waveforms on the B&K Model 1450 Diagnostic Oscilloscope. Not supplied with Model 1450. Shpg. wt., 1 lb. **NET: \$12.95**

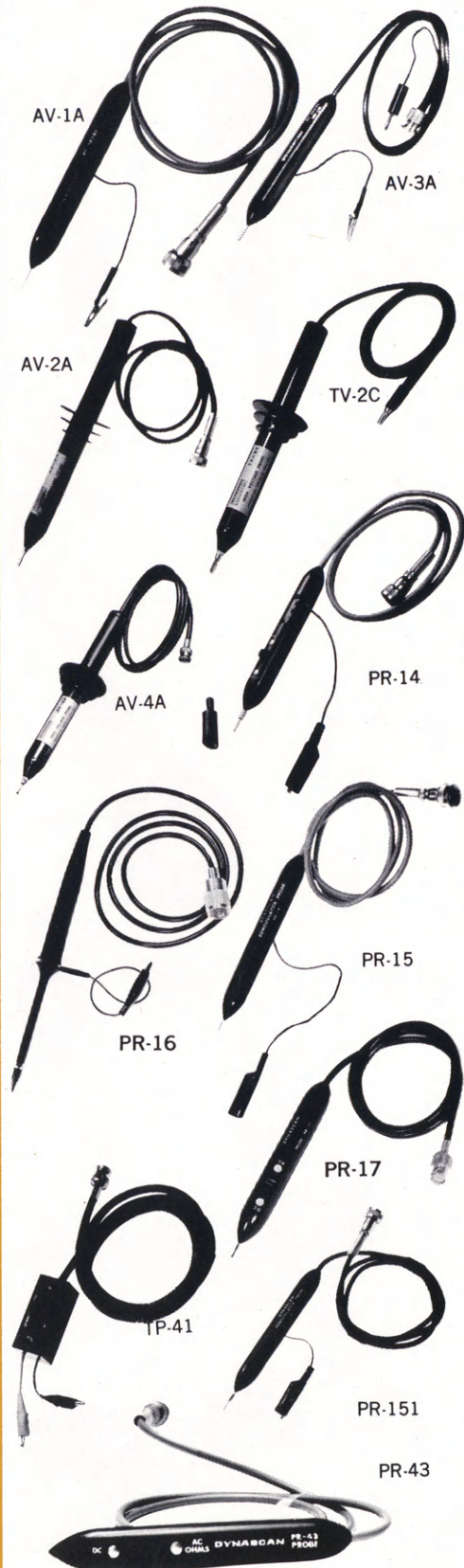
Model PR-16 Combination 10:1 and Direct Probe. Exact replacement for probe furnished with the B & K Model 1460 Triggered Sweep Oscilloscope. Shpg. Wt., 1 lb. **NET: \$14.95**

Model PR-17 AC-DC Probe. Exact replacement for probe furnished with the B & K Model 176 F.E.T. VOM. Shpg. wt., 1 lb. **NET: \$7.95**

Model PR-43 DC/AC/Ohms Probe. Exact replacement for test probe with switch and ground lead supplied with B&K Model 175 VTVM, Model 177 VTVM and Model 375 VTVM. Shpg. wt., 1 lb. **NET: \$5.95**

Model PR-151 RF Demodulator Probe. Exact replacement for probe furnished with B&K Model 415 Alignment Generator. Shpg. wt., 1 lb. **NET: \$10.95**

Model TP-41 RF Cable. Exact replacement for cable furnished with B&K Model 415 Alignment Generator. With selectable terminations of 75 or 300 ohms. Shpg. wt., 1 lb. **NET: \$10.95**



CRT Rejuvenator/Tester Adapters

Shpg. wt., 6 oz.

Model ASM-58B. For Type 23EP4 CRT. Replaces "D" adapter. For use with all B&K CRT Tester/Rejuvenators. **NET: \$1.95**

Model CR-50. For use with B&K Model 440 CRT Rejuvenator/Tester. Adapts the 440 to 16", 19", 23" and 25" color CRT's. **NET: \$5.95**

Model CR-55. For use with B&K Models 445 and 465 CRT Rejuvenator/Testers. Adapts to Type 12BRP4 transistorized CRT. **NET: \$3.95**

Model CR-57. For use with B&K Models 445 and 465 CRT Rejuvenator/Testers. Adapts to 20 mm-neck CRT's. **NET: \$3.95**

Model CR-58. For use with B&K Model 465 CRT Rejuvenator/Tester. Adapts to G.E. Type 11SP22 color CRT. **NET: \$4.95**

Replacement CRT Adapters for B & K Models 466 and 465 Tester/Rejuvenators. These adapters are furnished with the instruments and are listed here for replacement purposes only. Shpg. wt., 6 oz.

Model CR-60. Black-and-white CRT adapter for 465. **NET: \$6.10**

Model CR-61. Color CRT adapter for 465. **NET: \$7.09**

Model CR-62. A, B, C B&W adapter for 466. **NET: \$5.95**

Model CR-63. H, J, color CRT adapter for 466. **NET: \$9.95**

Model CR-64. K, L, color adapter for 466. **NET: \$5.95**

NEW! Special CRT Adapters for B & K Models 466 and 465 Tester/Rejuvenators. These adapters are not furnished with the instruments. Shpg. wt., 6 oz.

Model CR-54. 90° color CRT adapter for 465; checks G.E. CRT's: 15MP22, 15YP22, 17EXP22, 17FJP22. **NET: \$5.95**

Model CR-56. 110° color CRT adapter for 465; checks RCA CRT, type 18VAN22. **NET: \$5.95**

Model CR-65. B & W CRT adapter for 466; checks CRT types 23EP4, 23Q4 and a number of imported CRT's. **NET: \$5.95**

Model CR-66. 90° color CRT adapter for 466; checks G.E. CRT's: 15MP22, 15YP22, 17EXP22, 17FJP22. **NET: \$5.95**

Model CR-67. 110° color CRT adapter for 466; checks RCA type 18VAN22. **NET: \$5.95**

Tube Tester Adapters

Model TC-62A. Novar "A" adapter, for use with B&K Model 600 Tube Tester. Shpg. wt., 12 oz. **NET: \$2.50**

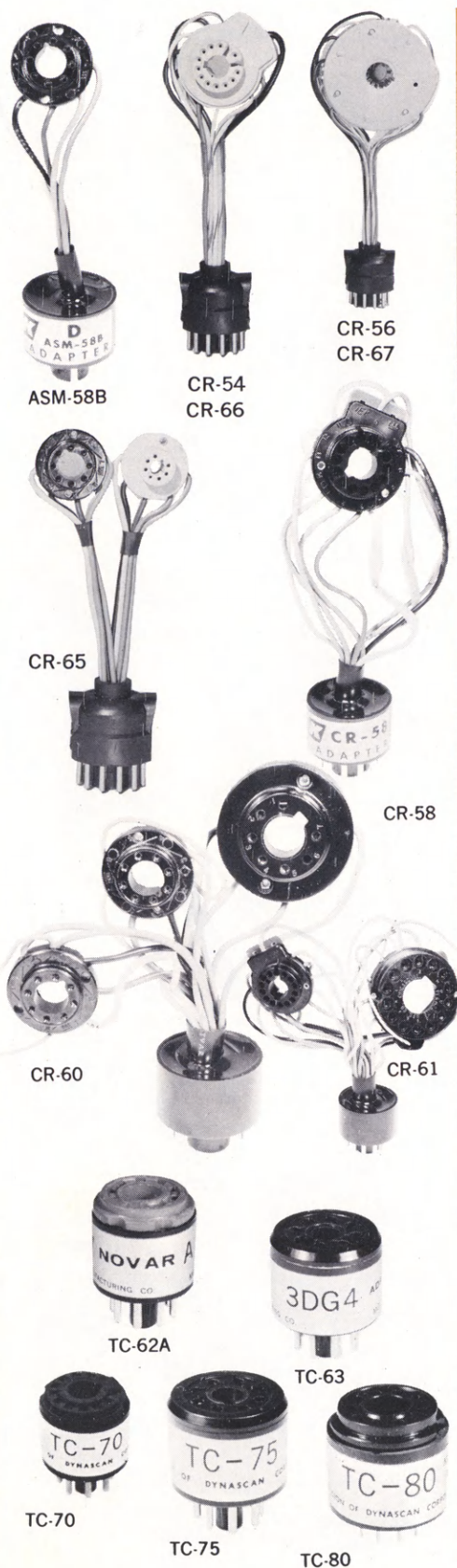
Model TC-62B. Novar "B" adapter, for use with B&K Model 600 Tube Tester. Shpg. wt., 12 oz. **NET: \$2.50**

Model TC-63. Adapter for Type 3DG4 tube. For use with B&K Model 600 Tube Tester. Shpg. wt., 12 oz. **NET: \$2.50**

Model TC-70. Adapter for high-voltage rectifier tubes. For use with B&K Models 600, 606 and 700 Tube Testers. Shpg. wt., 12 oz. **NET: \$2.50**

Model TC-75. Adapter for Type 6BK4 tube. For use with B&K Models 600, 606, 700 and 707 Tube Testers. Shpg. wt., 12 oz. **NET: \$2.50**

Model TC-80. Adapter for Magnoval tubes and Novar sockets. For use with B&K Models 600, 700 and 707 Tube Testers. Shpg. wt., 12 oz. **NET: \$3.50**





TV Analyst and Servicing Aids

Accessories

TV Analyst Accessories

Model A-108. Modification Kit for Model 1077 Analyst. Adds the "Solid State Sweep Drive" capability to Model 1077 units with serial numbers below A-12943. This feature enables the modified instrument to work in all areas of transistor television receivers, including sweep circuits. With detailed instructions. Shpg. wt., 2 lbs.

NET: \$7.50

Model ASM-44 Slide Set. Consists of 5 slides of flying spot scanner patterns. For use with B&K Model 1076 Television Analyst, Serial No. below 425301 and from 505001 to 506100. Shpg. wt., 8 oz.

NET: \$4.20

Model ASM-110 Slide Set. Consists of 4 slides of standard flying spot scanner patterns. Replaces set furnished with B&K Model 1076 TV Analyst, Serial No. 425301 and up, excluding 505001 to 506100 (use ASM-44 slide set above); also B&K TV Analysts, Models 1077 and 1077B. Shpg. wt., 8 oz.

NET: \$3.00

Clear Slides. Use these slides to make your own pattern with grease pencil or film positive.

Model PM-8. For use with B&K Model 1075 TV Analyst.

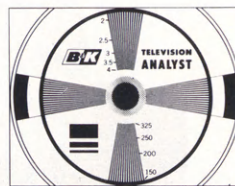
Model PM-77. For use with B&K Model 1076 TV Analyst.

Each. Wt., 2 oz.

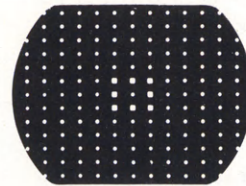
NET: \$.75

6 Slides. Wt., 8 oz.

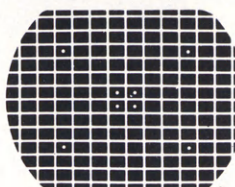
NET PER PKG.: \$3.50



STANDARD TEST PATTERN



WHITE DOT PATTERN



CROSS HATCH PATTERN



COLOR BAR PATTERN

Servicing Aids

Dynaflex 3-Point Probe

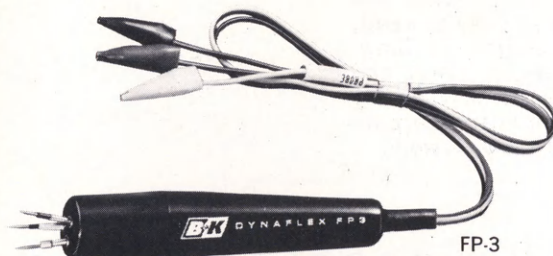
Model FP-3. Versatile probe for fast, one-handed in-circuit testing. Provides instant, positive connection to as many as 3 printed circuit board terminals at once. Automatically adjusts to any spacing, $\frac{1}{32}$ " to $\frac{5}{8}$ ". Contact resistance, less than .05 ohm. Use with B&K Model 162 Transistor/FET Tester, any VTVM, VOM, TVOM, or any other transistor tester. Shpg. wt., 8 oz.

NET: \$9.95

Dyna-Probe High-Voltage Analyst

Model HV-30. For direct high-voltage readings up 30,000 volts. Ideal for measuring critical high voltages in both black and white and color TV servicing—especially CRT voltages. Probe is triple insulated. Meter has a $1\frac{3}{4}$ " face and a 50-microamp movement; clip-on mounting feature. Auto-tilt meter stand provided. Each meter individually factory calibrated at 25,000 volts. Reads 0-30,000 volts; 16,000 ohms/volt sensitivity. Accuracy, $\pm 2\%$ at 25,000 volts; $\pm 3\%$ of full scale overall. Probe length, $14\frac{1}{2}$ "; case size, $3\frac{1}{2}$ "x $4\frac{1}{2}$ "x 16 ". Complete with leads, case and manual. Shpg. wt., $1\frac{1}{2}$ lbs.

NET: \$24.95



FP-3



HV-30



Instruction Manuals Lead the Industry

B & K Goes All the Way to Assist You...

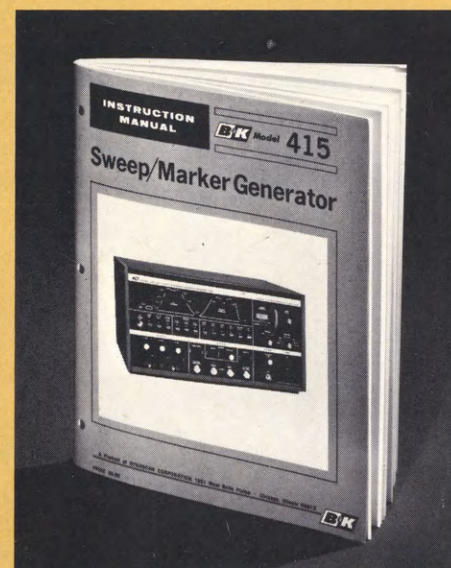
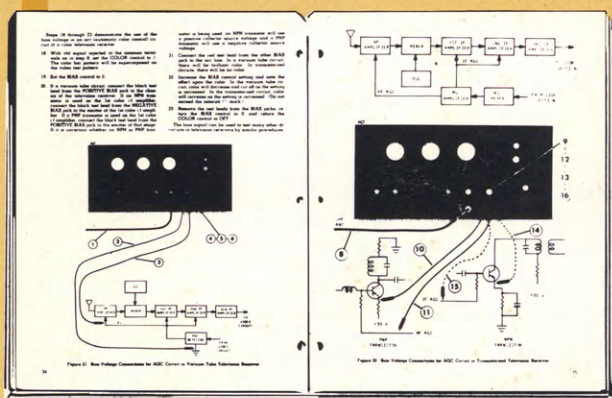
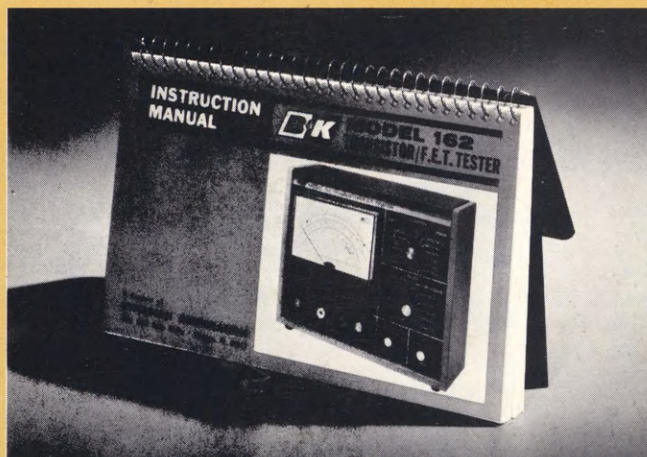
Our dedication to the task of providing you with the finest test equipment you can buy, does not end with the design and production of the actual test instruments. We at B & K feel it also is our responsibility to give you Instruction Manuals that will enable you to master your B & K equipment fully and quickly.

No Guess-Work...

There's no guess-work when you use B & K Instruction Manuals. The material is carefully organized by user-oriented specialists, to take you step by step through all the capabilities and functions of your B & K test unit. "Plain talk" is used throughout. Hundreds of drawings and block diagrams, as well as schematics — are used. Typically, a Manual will include a Table of Contents; Operating Procedure; Trouble-Shooting Techniques; Procedures for Performance Testing; Theory of Operation; Adjustment and Maintenance. A plus feature of every B & K Manual: They teach analyzing techniques and trouble-shooting shortcuts and tips, beyond teaching how to use the instrument itself.

Easiest Manuals to Use...

No effort has been spared to make B & K Manuals the easiest to use. While a great deal of material is presented (the 1077B Manual, for example, runs to over 100 pages), it is broken down into numerous logical sections. Easy-to-read, "open" type faces are used. Drawings and diagrams are large and very easy to follow. Finally, quality paper is used, for crisp, sharp reproduction of text and art work.



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